

Stigma, Avoidant-Orientation, and Self-Disclosure in Friendships

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Dissertation submitted in partial fulfillment of
the requirements for the degree of Doctor
of Philosophy in the Department of
Psychology and Neuroscience in the Graduate School
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ABSTRACT

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Abstract

The stigma surrounding mental illness has been shown to have a negative impact on social relationships. However, less research has focused on the mechanisms through which the connection between stigma and relational outcomes can be explained. The primary purpose of the three studies was to evaluate the extent to which chronic and situational forms of stigma and concealment negatively predict disclosure of negative emotions, distress, and personal information through the endorsement of avoidant-oriented motives and goals. In Study 1, cross-sectional methodology was used to evaluate the role of avoidant-orientation as a mediating mechanism through which internalized stigma predicts disclosure of negative emotions and distress to friends. In Study 2, experimental methodology was used to evaluate the extent to which a situational forms of stigma salience affects endorsement of avoidant-oriented friendship goals and self-disclosure within a hypothetical friendship formation scenario. In Study 3, experimental methodology was used to test the effect of avoidant and approach-oriented friendship goals on self-disclosure within the same hypothetical friendship formation scenario. Across the studies, results did not provide evidence for the role of avoidant-orientation as a mechanism through which forms of stigma affect self-disclosure. However, results from Study 1 and Study 2 did provide evidence that concealing mental illness from friends negatively predicts self-disclosure within established and developing friendships.

Dedication

This dissertation is dedicated to my grandparents -- Margaret and Roland
Fredericks and Joy and Rollie Lattanner.

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1. Introduction

The stigma surrounding mental illness continues to be a pervasive and enduring force impeding the recovery process of people coping with mental illness (PWMI; Wahl, 2012). For people coping with mental illness, the importance of forming, developing, and engaging within intimate interpersonal relationships cannot be overstated.

Emphasizing this importance, the Substance Abuse and Mental Health Services Administration has identified community, “having relationships that provide support, friendship, love, and hope” (SAMHSA, 2016) as one of four primary dimensions that support a life of recovery. However, the stigmatizing label of “mentally ill” can have an enduring impact on the course of mental illness by negatively impacting access to and quality of interpersonal relationships. As a result, people coping with mental illness continually face a stigma-driven dilemma as stigma hinders one of the most influential coping resources that people diagnosed with mental illness can benefit from: intimate interpersonal relationships.

PWMI often experience social exclusion from close friends and family members (Link, Cullen, Frank, & Wozniak, 1987; Cechnicki, Angermeyer, & Bielanska, 2011). In addition, the internalization of societal beliefs held towards PWMI and the anticipation of rejection can each indirectly impact the development and quality of close relationships (Link, Wells, Phelan, & Yang, 2015). However, relational consequences that stem from stigma are often attributed either solely to the symptoms accompanying

the illness or to direct forms of social exclusion. The following dissertation outlines one potential pathway through which both chronic forms of stigma (e.g., internalized stigma) and situational forms of stigma (e.g., stigma salience) impact the development of relational intimacy within established and burgeoning friendships *indirectly* by motivating the regulation of self-disclosure from a protectively avoidant-orientation (See Figure 1).

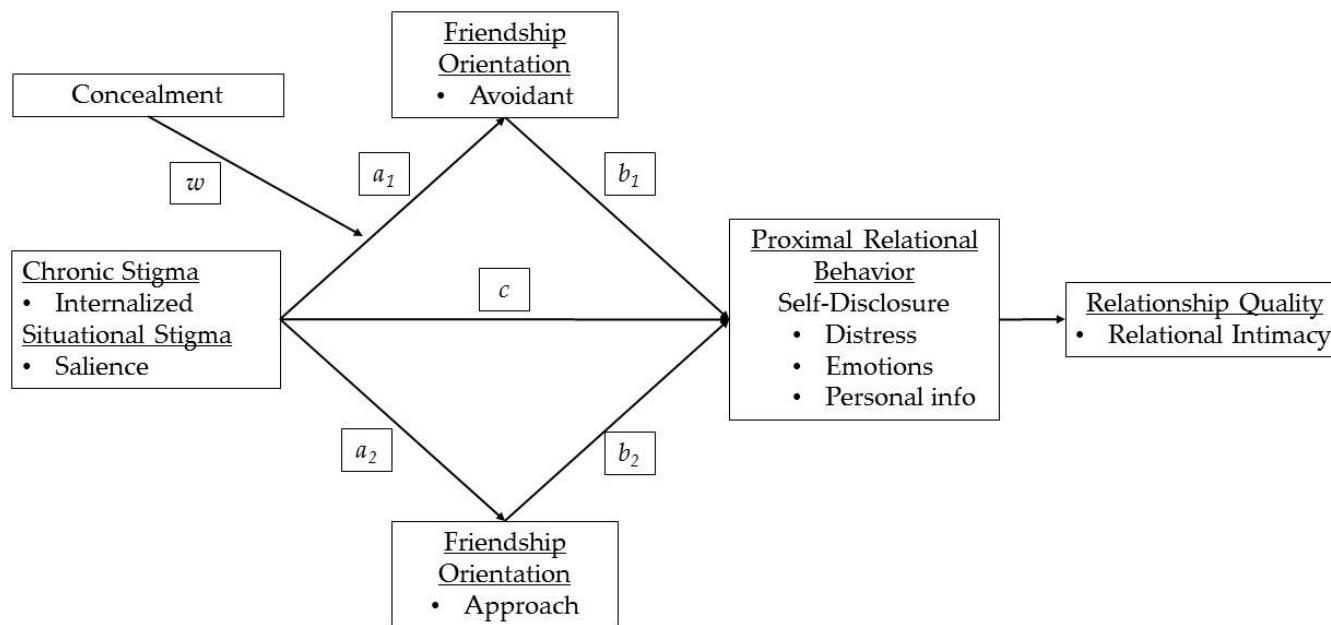


Figure 1: Moderated-Mediation Model of Stigma, Avoidant-Orientation and Self-Disclosure

Avoidant-oriented goals motivate self-disclosure in ways that, although adaptively protective, can limit the growth and development of relational intimacy (Murray, Derrick, Leder, & Holmes, 2008). The proposed process is particularly problematic given that it is essential that PWMI engage within close and supportive interpersonal relationships in order to maintain psychological well-being (Chou & Chronister, 2012; Hogan, 2003). The following sections will: first, introduce the theoretical basis for the proposed model, modified labeling theory (Link, et al., 1989), second, introduce the primary components of the proposed moderated-mediation model, third, outline the methodology and results of three separate studies that test components of the proposed model, and fourth, provide a general discussion addressing implications results have for future work.

1.1 Modified Labeling Theory

Modified labeling theory (Link, et al., 1989) serves as the theoretical foundation upon which the proposed model and empirical studies are based upon. According to modified labeling theory from an early age people are socialized into believing that people with mental illness are dangerous, devalued, and looked upon differently by society. These negative beliefs about PWMI are known as public or societal stigma (Link, 1987). When a person is diagnosed with a mental illness, societal beliefs are now applicable to him or herself, leading to anticipation of devaluation and social exclusion by others. The now labeled person, who often views his or her stigmatized status as a

threat to inclusionary status and relational value, experiences a reduction in self-esteem and self-efficacy. In addition, the person may protect him or herself against potential exclusion by engaging in protective coping strategies such as concealment or social withdrawal (Link, Struening, Cullen, Shrout, & Dohrenwend, 1989). However, aside from these specific coping strategies, research has not addressed the broader range of normative relational processes and behaviors, potentially motivated by stigma and concealment, which have implications for the development of relational intimacy within the context of friendships. As a result, this current work attempts to extend established research related to Modified Labeling Theory, proposing an underlying motivational mechanistic process through which stigma impacts a broader range of relational behaviors.

1.2 Moderated-Mediation Model of Stigma, Avoidant-Orientation, and Self-Disclosure

The following sections will outline the primary components of the moderated-mediation model of stigma, avoidant-orientation, and self-disclosure.

1.2.1 Internalized Stigma

Internalized stigma transcends mere awareness of public stigma and involves a degree of agreement with societal beliefs and the application of those beliefs to oneself (Corrigan, & Watson, 2002; Corrigan, Watson, & Barr, 2006). Internalizing public stigma is accompanied by feelings of shame, embarrassment, demoralization, perceptions of low relational value, and expectations that social exclusion is not only likely, but also

warranted (Ritsher, & Phelan, 2004; Watson, Corrigan, Larson, & Sells, 2007; Livingston, & Boyd, 2010). In a meta-analysis investigating the psychosocial correlates of internalized stigma, Livingston and Boyd (2010) found that internalized stigma is associated with lower levels of self-esteem, hope, self-efficacy, and empowerment. Internalized stigma also affects relational behavior and outcomes. Internalized stigma is associated with lower levels of social support, community integration (Livingston & Boyd, 2010), willingness to foster intimacy (Segalovich, Doron, Behrbalk, Kurs, & Romem, 2013), and higher levels of loneliness (Switaj, Grygiel, Anczewksa, & Wcioka, 2013). Longitudinally, studies have shown that increasing levels of internalized stigma predict less frequent social interaction and lower perceived relationship quality (Yanos, Roe, Markus, & Lysaker, 2008; Yanos, Rosenfield, & Horwitz, 2001). Therefore, it is well established that internalized stigma is related to a myriad of less than ideal relational outcomes, however, what is less well understood are the underlying mechanistic processes that can provide further explanation.

More recently, researchers have proposed conceptual models organizing the progression of internalized stigma and accompanying psychosocial consequences. In doing so, research has primarily focused upon self-esteem, self-efficacy, and hope as mediating mechanisms. These conceptual models propose that internalized stigma alters self-perceptions (e.g., self-esteem and self-efficacy) and beliefs about achieving life goals (e.g., hope) which subsequently motivate maladaptive coping strategies (e.g.,

concealment and withdrawal) that negatively affect relationship quality and mental health (Ilic, Reinecke, Bohner, Rottgers, Beblo, Driessen, Frommberger, & Corrigan, 2011; Corrigan, Rafacz, & Rusch, 2011). For example, reduced self-esteem and hope have been found to partially mediate the relationship between internalized stigma and quality of life (Maishiach-Eizenber, Hasson-Ohayon, Yanos, and Lysaker, 2013), social avoidance, and depressive symptoms (Yanos, Roe, Markus, and Lysaker, 2008). The current dissertation attempts extend this line of research by proposing a mediating mechanism that is downstream from stigma reduction of self-esteem, self-efficacy, and hope and that has been shown to impact relational behavior and outcomes. In doing so, the following three studies empirically test, avoidant-oriented motivation and goals as one underlying self-regulatory mechanism through which internalized stigma affects the ways in which PWMI regulate self-disclosure within developing and established friendships.

The consistently robust relationship between internalized stigma and self-esteem is particularly important to the conceptual background of the proposed model. Past research has differentiated the protective versus enhancing ways that people relatively low in self-esteem regulate behavior within close relationships (Forest, & Wood, 2011; Wood & Forest, 2016). First, people relatively low in self-esteem are more likely to present themselves in a protective nature in order to avoid embarrassment, humiliation, or social exclusion (Baumeister, Tice, & Hutton, 1989; Heimpel, Ellion, & Wood, 2006)

and are more likely to endorse avoidant-oriented relationship goals during relational conflict (Murray, Holmes, & Collins, 2006; Murray, Holmes, & Griffin, 2000). Second, people relatively low in self-esteem limit depth of self-disclosure to both novel and established relationship partners (Wood & Forest, 2016). As a result, research and theory addressing the interrelationships between self-esteem, interpersonal self-regulation, and self-disclosure seem to be an appropriate candidate for application within the context of internalized stigma.

1.2.2 Stigma Salience

In addition to internalized stigma, the proposed model suggests that when PWMI encounter situations in which their identity of “mentally ill” becomes salient (conceptualized in the model as situational stigma), then endorsement of avoidant-oriented goals increases. Previous experimental research has demonstrated that subtle primes making mental health history salient affect motivational orientation. Oyserman and colleagues (2007) found that making participants’ stigmatized identity salient was sufficient to induce a stronger prevention oriented regulatory focus compared to a control condition. Similarly, stereotype threat motivates regulatory focus toward a prevention orientation (Seibt & Forster, 2004). In an initial experimental evaluation of the proposed model, making PWMI’s stigmatized identity salient by writing about a past experience of being social excluded by a close friend when he or she found out about their mental health history heightened avoidant-oriented friendship goal

endorsement for participants relatively high in concealment (Lattanner & Richman, 2016). Collectively, these studies provide preliminary evidence that subtle priming of one's stigmatized status can have an influence on motivational orientation both generally and within the context of relationships. However, to my knowledge, no studies have experimentally addressed the extent to which avoidant-oriented social goal activation inhibits intimate relational behaviors such as self-disclosure. Finally, Research by Park and Baumeister (2015) has shown that participants (without a psychiatric diagnosis) who wrote about a past exclusionary experience as compared to a past experience of social acceptance more strongly endorsed a prevention orientation. Collectively, these studies provide evidence that making stigmatized identity and/or discussing exclusionary events direct regulatory focus in an avoidant-oriented direction.

1.2.3 Concealment

The model also considers level of concealment as a moderator of the indirect relationship between stigma and self-disclosure through avoidant-oriented friendship goals. Specifically, the model predicts that stigma activates avoidant-oriented friendship goals particularly for PWMI who are concealing mental health problems from friends.

Actively concealing a stigmatized identity predicts a multitude of negative consequences (Chaudoir, Earnshaw, & Andel, 2013; Pachankis, 2007; Quinn & Chaudoir, 2009). People concealing a stigmatized identity during an experimental interpersonal interaction talk less and have interactions that are shorter in length. Following the

interaction, participants report less belonging, which was attributed to limited self-disclosure and feelings of inauthenticity (Newheiser & Barreto, 2014). This study suggests that concealment potentially perpetuates a general avoidant-orientation during interpersonal interactions, limiting self-disclosure and affecting the quality of connection.

1.2.4 Avoidant and Approach-Oriented Interpersonal Motivation

Establishing, developing, and maintaining quality social relationships involve the dynamic interplay of goals directed toward facilitating relationship growth and those directed toward protecting against potential rejection or dissolution of the relationship (Murray, Derrick, Leder, & Holmes, 2008). Within an approach and avoidance framework, recent lines of research have provided theoretical models outlining antecedent external and internal factors that activate approach and avoidant-oriented social goals, proximal goal-directed interpersonal behavior, and distal relationship related outcomes (Gable, 2006; Gable, & Strachman, 2008; Murray, Derrick, Leder, & Holmes, 2008). Competing goals of fostering desirable and necessary relationship features (intimacy and mutual support) while also protecting oneself against rejection and the dissolution of relationships, is a common regulatory challenge addressed in the context of close relationships (Fitzsimons & Finkel, 2011; Murray, Holmes, & Collins, 2006).

The proposed model suggests that because of the stigma surrounding mental illness, PWMI often encounter approach versus avoidance regulatory dilemmas when forming, developing, and maintaining interpersonal relationships. This social dilemma involves conflicting goals that require a regulatory balance to, first, develop relational intimacy and, second, to avoid social exclusion. The way this regulatory dilemma is managed carries implications for relational behavior (Murray, 2005) and distal relationship outcomes (Gable, 2006).

The proposed model incorporates elements of two theoretical perspectives that address self-regulatory processes within close relationships from an approach and avoidant oriented social goal perspective: Gable's (2006) hierarchical model of approach-and-avoidance motivation and goals and Murray, Holmes, and Collins's (2006) risk regulation system. Within the proposed model, the mediating mechanism of primary interest is avoidant-oriented motivation and goals. Past research suggests that neither internalized stigma nor stigma salience predict a reduction in approach-oriented friendship goals (Lattanner & Richman, 2016). As a result, stigma primarily affects interpersonal behavior through the activation of avoidant-oriented friendship goals (Lattanner & Richman, 2016).

Approach-oriented regulation motivates behavior towards relational growth, particularly when social incentives are available (Elliot, Gable, & Mapes, 2006; Gable, 2006). Avoidant-oriented social goals facilitate security by motivating behavior away

from dependence and devaluation when facing a social threat, particularly for people low in self-esteem (Murray, 2005). Self-esteem is an integral pre-cursor to avoidant-oriented social goal endorsement as people relatively low in self-esteem report a stronger intention to avoid negative relational experiences (Murray, Derrick, Leder, & Holmes, 2008). Although avoidant goals are adaptive when managing interpersonal concerns (Murray, Holmes, & Collins 2006), over time, avoidant-oriented goals and subsequent protective relational behaviors, such as limiting self-disclosure and dependence, increase the risk of downstream negative relationship features such as loneliness, relationship anxiety, and negative attitudes towards relationships (Gable, & Berkman, 2010; Gable, 2006).

1.2.5 Self-Disclosure and Intimacy

According to Prager (1995) relational intimacy is characterized by affection, mutual trust, and cohesiveness. Affection is the perception of mutual and enduring positive regard and trust is the understanding that one can risk dependence upon his or her relationship partner. Highlighting the role of affection and trust in managing relational approach and avoidance regulatory conflicts, Deutsch (1973, p. 148) defines trust as, “confidence that one will find what is desired from another, rather than what is feared.” Finally, cohesiveness involves a sense of togetherness and the sharing of time and activities together. The aforementioned criteria speak the characteristics of intimate friendships that PWMI can most benefit from. However, relational intimacy is the bi-

product of repeated intimate interactions involving self-disclosure (Reis & Shaver, 1988). As a result, in order to understand the ways in which stigma affects relational intimacy, it is important to consider the ways in which stigma affects self-disclosure. According to Reis and Shaver's (1988) process model of intimacy, approach and avoidance motives are precursors to the initiation or inhibition of self-disclosure.

Self-disclosure involves the intentional disclosure of personal information to at least one other person (Derlega, Metts, Petronio, & Margulis, 1993). However, not all forms of disclosure are equal when it comes to the development of relational intimacy. Self-disclosure can be descriptive, evaluative, or affective in nature. Descriptive disclosure involves personal facts (e.g., the city you grew up), evaluative disclosure consists of opinions and attitudes (e.g., political beliefs), and affective disclosure consists of emotions (e.g., distress). Disclosing highly personal information and emotions as compared to disclosing personal facts most readily foster relational intimacy (Derlega, Metts, Petronio, & Margulis, 1993; Graham, Huang, Clark, & Helgeson, 2008).

The proposed model predicts that when avoidant-oriented social goals are activated the depth of self-disclosure, particularly in relation to highly personal information, attitudes and opinions, and emotional distress, is limited in service of protecting oneself against potential relational risks (e.g., rejection, devaluation). Alternatively, the activation of approach-oriented goals motivate disclosure in the

service of relational rewards (e.g., support, intimacy) and the content of the disclosure is more likely personal and emotional in nature.

In line with focusing upon an approach versus avoidance regulatory conflict as an antecedent to self-disclosure, Omarzu's (2000) disclosure decision model emphasizes that self-disclosure strategies depend upon an assessment of subjective utility versus the subjective risk. As perceived risks becomes salient the depth at which a person will self-disclose decreases. In relation to the proposed model, when perceived risk of engaging in intimate self-disclosure increases, either through the internalization of stigma or by having one's stigmatized identity made salient, it is hypothesized that a person's willingness to engage in affective disclosures of distress, emotions, and personal information will decrease.

1.3 Overview of Studies

The following dissertation includes three separate studies that attempt to empirically evaluate the proposed model. Study 1, involved a correlational evaluation of the extent to which the relationship between internalized stigma and the disclosure of distress and negative emotions to friends is mediated by avoidant oriented friendship goal endorsement. In addition, Study 1 evaluated the extent to which concealment moderates the relationship between internalized stigma and level of endorsement of avoidant-orientation. Study 2 evaluated the proposed model experimentally by manipulating stigma salience and subsequently measuring avoidant and approach-

oriented friendship goals and self-disclosure within a hypothetical social scenario, meeting a potential friend for the first time. Study 3 experimentally evaluated the latter half of the model. Study 3 involved an experimental manipulation of approach and avoidant-oriented friendship goals and the subsequent measurement of intended self-disclosure within the same hypothetical scenario of meeting someone for the first time. In addition, fear of negative evaluation and self-esteem were evaluated as potential moderators of the effect the goal orientation manipulation on self-disclosure.

2. Study 1: Overview and Purpose

Study 1 investigated the extent to which level of internalized stigma, level of concealment of mental health history, and endorsement of approach and avoidant friendship orientation predict variation in disclosure of distress and negative emotions to a close friend. Specifically, the proposed theoretical moderated-mediation model was evaluated from a regression framework to evaluate the extent to which: (1) internalized stigma predicts variation in willingness to disclose distress and emotions to a close friend. (2) Internalized stigma predicts variation in endorsement of avoidant-orientation, controlling for symptom distress. (3) Level of concealment moderates the relationship between internalized stigma and endorsement of avoidant-orientation. (4) Avoidant-orientation predicts variation in disclosure of distress and emotions to a close friend. (5) Avoidant-orientation mediates the relationship between internalized stigma and disclosure of distress and emotions to a close friend, controlling for symptom distress. In order to evaluate the proposed model, five hypotheses were tested.

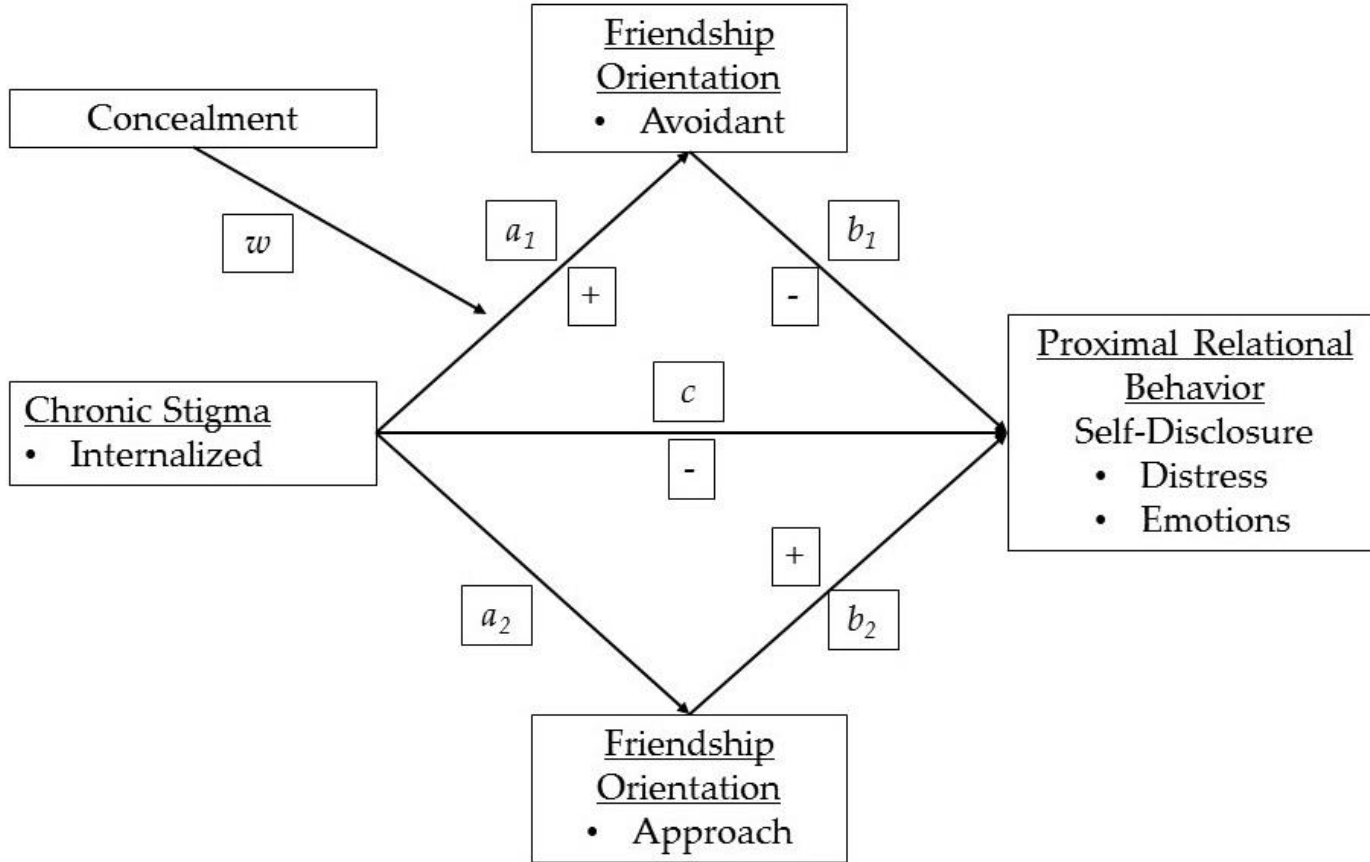


Figure 2: Study 1 Moderated-Mediation Model

2.1 Hypotheses

Hypothesis 1 addresses path c within the proposed moderated-mediation model of stigma, avoidance and approach motivation, and disclosure. Path c hypothesizes that internalized stigma negatively predicts variation in disclosure of distress and negative emotions to friends.

Hypothesis 2a addresses path a_1 within the proposed moderated-mediation model. Path a_1 hypothesizes that internalized stigma positively predicts variation in endorsement of avoidant-orientation within friendships, controlling for current symptom distress.

Hypothesis 3a addresses path b_1 within the proposed moderated-mediation model. Path b_1 hypothesizes that avoidant-orientation negatively predicts variation in disclosure of distress and negative emotions to a close friend.

Hypothesis 3b addresses path b_2 within the proposed moderated-mediation model. Path b_2 hypothesizes that approach-orientation positively predicts variation in disclosure of negative emotions and distress to a close friend.

Hypothesis 4 addresses the moderating pathway w predicting the extent to which internalized stigma predicts variation in avoidant-orientation is conditional upon level of concealment. Specifically, pathway w hypothesizes that for participants relatively high in concealment (1 standard deviation above the mean in level of concealment) internalized stigma predicts a higher endorsement of avoidant-orientation in comparison to participants at mean level or relatively low in concealment (1 standard deviation below the mean in level of concealment).

Hypothesis 5 addresses the indirect pathway, *ab*, through which avoidant-orientation mediates the relationship between internalized stigma and disclosure of distress and negative emotions to a close friend. Specifically, pathway *ab* hypothesizes that the relationship between internalized stigma and disclosure of distress and negative emotions is partially explained by the endorsement of avoidant-orientation.

2.1.1 Method

2.1.1.1 Recruitment

An a priori power analysis was run to estimate the necessary sample size to achieve a power of .80. Potential variables included in the multiple regression equation were expected to include seven predictors; level of current symptom distress and duration coping with mental illness as covariates (step 1), level of internalized stigma, level of concealment, and the level of internalized stigma X level of concealment interaction (step 2), level of avoidant-orientation and level of approach-orientation (step 3). Based upon past research (Lattanner & Richman, 2016) it was expected that the aforementioned predictors would account for a medium-to-large effect size when predicting variation in disclosure of distress and negative emotions to a close friend ($f^2 = .15$). Using G*Power software, in order to achieve a projected level of power of .80 under the predicted criteria, the study required 103 participants.

A panel of participants with a history of mental illness were recruited to complete Study 1. TurkPrime, the company that recruited the sample of participants, was given the following items to use as inclusion criteria for the panel; “have you ever been diagnosed with a mental illness “(yes/no) and “are you currently experiencing any mental health problems that significantly affect your life” (yes/no). To be included in the panel participants had to respond

“yes” to both items. The sample of participants who met the aforementioned criteria and completed the study included 206 participants. Participants were compensated by TurkPrime for participation at differential levels of compensation.

2.1.1.2 Participants

A community sample of 206 participants, 18 years of age or older who were initially screened for having been diagnosed with a mental illness and currently experiencing a significant mental health problem(s) completed Study 1. Participants completed the study between October 28, 2016 and January 14, 2017.¹ The final sample included for analyses consisted of 131 participants, 56.5% female, predominantly Caucasian (85.5%), and on average

¹ Before composite variables were computed, data was screened for quality. The primary indicators of data quality involved time spent completing the entire study and average time spent per item on surveys of primary interest (internalized stigma, avoidant orientation, approach orientation, distress disclosure, and emotional disclosure). Participants were told that the study would take about 20 minutes to complete. There was concern about the quality of the data of participants who completed the study under 10 minutes and for those who took over 30 minutes. This concern was based on completion time of research assistants when piloting the study. In addition, for participants who completed the study between 10 and 30 minutes, it was decided that participants who spent on average under 3 seconds per item on the internalized stigma, friendship orientation, and distress disclosure measures, and under 2 seconds per item on the emotional disclosure measure were potentially not reading each item in its entirety. Of the 206 participants who completed the study, 39 participants completed the study in less than 10 minutes, 20 participants completed the study in over 30 minutes, and 14 participants who completed the study between 10 and 30 minutes completed primary measures at a rate of less than 3 seconds (internalized stigma, friendship orientation, and distress disclosure) or less than 2 seconds (emotional disclosure) per item. In addition, following the panel screening process, 2 participants who completed the study reported never having been diagnosed with a mental illness or not currently experiencing a mental health problem that significantly impacts his or her life. As a result, based upon timing and inclusion criteria, data from 75 participants were removed from primary analyses. Analyses were also completed with the initial sample of 206 participants. Results from analyses involving initial sample of 206 participants were consistent with results reported.

41.25 ($SD = 12.3$) years old. Participants reported residing in 36 different states across the United States. On average participants had been coping with a mental illness for 19.32 years ($SD = 11.02$), 40.5 % of participants reported a history of hospitalization because of his or her mental illness, 76.3% reported currently taking medication for his or her mental illness, and 49.6% of participants reported currently participating in therapy or counseling. For diagnostic criteria, 77.9% of participants reported coping with both a mood and anxiety related disorder, 10.7% of participants reported coping with only a mood disorder, 6.9% of participants reported coping with only an anxiety related disorder, and 4.6% reported coping with a psychotic related disorder. See Table 1 for a complete summary of background characteristics.

Table 1: Study 1 Sample Characteristics

Characteristic	<i>M (SD) or % (n)</i>
<i>Age</i>	41.25 (12.30)
<i>Years coping with mental illness</i>	19.32 (11.02)
<i>Gender</i>	
Male	43.5% (57)
Female	56.5% (74)
<i>Ethnicity</i>	
White	85.5% (112)
Black	4.6% (6)
Hispanic	3.8% (5)
Asian	1.5% (6)
Native American	0.8% (1)
Multi-racial	5.3% (7)
<i>Relationship Status</i>	
Married	35.9% (47)
In a relationship or Dating	19.8% (26)
Single	25.2% (33)
Divorced or Separated	19.7% (25)
<i>Employment Status</i>	
Employed (full-time or part-time)	42.0% (55)
Unemployed	13.7% (18)
On disability due to mental health	15.3% (20)
Retired	10.7% (14)
Full-time home-maker	11.5% (15)
Student	6.9% (9)
<i>Type of Psychological Difficulties</i>	
Mood disorder	10.7% (14)
Anxiety disorder	6.9% (9)
Mood and Anxiety disorder	77.9% (102)
Psychotic disorder	4.6% (6)
<i>Past Hospitalization</i>	40.5% (53)
<i>Current Treatment</i>	
Counseling / Therapy	49.6% (65)
Medication	76.3% (100)

2.1.1.3 Study Design and Measures

Participants completed questionnaires designed to measure the following constructs: internalized stigma, concealment from friends, avoidant and approach friendship orientation, emotional disclosure to a close friend, distress disclosure to a close friend, current symptom distress, self-esteem, background information relevant to mental health history, and demographic information. Questionnaires were randomized within ordered blocks due to concerns that stigma related measures may influence responses on friendship orientation and disclosure measures. First, participants completed the relational Self-Protection Motivation Questionnaire and Relational Connectedness Questionnaire to measure approach and avoidant-orientation. Each questionnaire was adapted to measure relational motivation specifically within the context of friendships (Murray, Derrick, Leder, & Holmes, 2008). Second, participants completed a randomized set of disclosure scales including the Distress Disclosure Index (Khan, & Hessling, 2001) and the Emotional Self-Disclosure Scale (Snell, Miller, & Belk, 1988). Third, participants completed a randomized set of stigma related questionnaires comprised of items measuring level of internalized stigma and level of concealment. Fourth, participants reported additional information pertaining to mental health history and demographic information. Fifth, participants completed the self-esteem scale (Rosenberg, 1965). All research procedures were approved by the Duke University Institutional Review Board.

2.1.1.4.1 *Internalized stigma*

Participants completed a questionnaire measuring internalized stigma that comprised of items across commonly used internalized stigma measures. The items included were reflective

of holding negative feelings about the self as a result of being diagnosed with a mental illness. The measure included, five items from the Berger HIV Stigma Scale – negative self-image subscale, adapted for mental illness (Berger, Ferrans, & Lashley, 2001; $\alpha = .87$); four items from the Internalized Stigma of Mental Illness Scale – alienation subscale (Ritsher, Otilingam, & Grajales, 2003; $\alpha = .78$); four items adapted from Link’s (1987) Devaluation-Discrimination scale (Quinn, et al., 2014; $\alpha = .78$). Participants responded to each item on a 7-point scale (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). In Study 1, the reliability of the internalized stigma measure was ($\alpha = .88$). See appendix A for the full list of items.

2.1.1.4.2 Concealment

Participants completed 3 items from the Disclosure Subscale of the Berger HIV Stigma Scale, adapted for mental illness (Berger, Ferrans, & Lashley, 2001) and one general concealment item pertaining to close friends (e.g., “In general, I tend to conceal my mental illness from friends.”; “I am very careful who I tell that I have a mental illness”; In many areas of my life, no one knows that I have a mental illness; I never feel the need to hide the fact that I have a mental illness from my friends). Participants responded to each item on a 7-point scale (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). In Study 1, the reliability of the concealment measure was ($\alpha = .80$). See Appendix B for a full list of items.

2.1.1.4.3 Avoidant Orientation

Participants completed the 10-item relational Self-Protection Goals Scale ($\alpha = .94$; Murray, Derrick, Leder, & Holmes, 2008) adapted to measure participants' motivation to avoid negative relational experiences and outcomes within their current friendships (e.g., "I worry that I will fail to accomplish my goals for maintaining a satisfying friendship"; "My major goal in my friendships is to avoid being a failure as a friend"). Participants rated these items on 7-point scales (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). In Study 1, the reliability of the adapted Self-Protection Motivation Questionnaire measure was ($\alpha = .88$). See Appendix C for a full list of items.

2.1.1.4.4 Approach Orientation

Participants completed the 7-item Relational Connectedness Goals scale ($\alpha = .88$; Murray, Derrick, Leder, & Holmes, 2008) adapted to measure participants' motivation to foster and develop positive relational qualities and outcomes within their current friendships (e.g., "I will be focused on promoting good events in my friendship"; "I will be trying to think of new things my friends and I can do together"). Participants rated these items on 7-point scales (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). In Study 1, the reliability of the adapted Relational Connectedness Motivation Questionnaire measure was ($\alpha = .62$). See Appendix D for the full list of items.

2.1.1.4.5 Emotional self-disclosure

Participants completed the Emotional Self-Disclosure Scale ($\alpha = .83 - .93$ across subscales; Snell, Miller, & Belk, 1988), a 40-item scale designed to measure willingness to discuss specific emotions with others. The measure was adapted to measure emotional disclosure to a close

friend. Items on the measure are reflective of eight distinct negative and positive emotions; (1) depression, (2) fear, (3) jealousy, (4) anxiety, (5) anger, (6) apathy, (7) calmness, and (8) happiness. On this scale, participants were presented with a single emotion and asked, “how willing would you be to discuss this emotion with a close friend?” on a 7-point Likert-scale, (1 = very unwilling, 2 = unwilling, 3 = somewhat unwilling, 4 = neutral, 5 = somewhat willing, 6 = willing, 7 = very willing). Items from the emotional disclosure scale were combined into negative emotion and positive emotion composite variables. Of primary interest in Study 1 was the negative emotions composite. The reliability of the negative emotion composite variable was ($\alpha = .97$). See Appendix E for the full list of items.

2.1.1.4.6 Distress Disclosure

Participants completed the Distress Disclosure Index ($\alpha = .92$; Khan, & Hessling, 2001), a 12-item scale designed to measure tendency to disclose (vs. conceal) personally distressing information, personal problems, and unpleasant emotions. The measure was adapted to measure distress disclosure to a close friend. Participants rated each item on a 7-point Likert-scale (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). In Study 1, the reliability of the distress disclosure measure was ($\alpha = .94$). See Appendix F.

2.1.1.4.7 Mental health history

Participants reported the type(s) of psychological difficulties that led them to being diagnosed with a mental illness. Participants also reported if they had been hospitalized because of his or her mental illness, if they are currently taking medication for his or her mental

illness, if they are currently participating in therapy because of his or her mental illness, and length in years that they have been coping with a mental illness.

2.1.1.4.8 Demographics

Participants completed background demographic information pertaining to their age, gender, relationship status, employment status, and race/ethnicity.

2.1.1.4.9 Self-esteem

Participants completed the 10-item Rosenberg Self-esteem Scale that measures global self-worth (Rosenberg, 1965) by measuring both positive and negative feelings about the self. All items were answered using a 4-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). In Study 1, the reliability of the self-esteem measure was ($\alpha = .90$). See Appendix G for a full list of items.

2.1.1.4.10 Symptom Distress

Participants completed 22 items from the Symptom Checklist (SCL-90R; Derogatis, Lipman, & Covi, 1973). Twelve items were from the depression subscale and 10 items from the anxiety subscale. Participants were asked to report the amount of psychological distress experienced within the past week, in relation to each item, on a 5-point scale (1 = not at all, 2 = a little bit, 3 = moderately, 4 = quite a bit, 5 = extremely). In Study 1, the reliability of the symptom distress measure was ($\alpha = .94$). See Appendix H for a full list of items.

2.1.1.4 Statistical Analyses

First, prior to completing primary data analyses, all variables were evaluated for violations of the statistical assumption of normality of residuals, as well as for the detection of statistical outliers ($\pm 2.5 SD$ from mean). Two categories of criteria were evaluated in order to address the extent to which the assumption of normality of residuals was met for each variable. First, descriptive statistics of skewness and kurtosis were evaluated for values greater than 1.00 or less than -1.00 (George & Mallery, 2003). Second, histograms and normal q-q plots were evaluated visually to detect severe departures from normality.

Second, between-subjects multivariate analyses of variance were conducted to detect significant differences in primary measures (internalized stigma, concealment, avoidant-orientation, approach-orientation, distress disclosure, and disclosure of negative emotions) across diagnostic category, previous hospitalization, relationship status, and gender.

Third, bivariate correlations were conducted between symptom distress and length of coping and primary variables in order to detect additional covariates to be included in primary analyses.

Fourth, bivariate correlation analyses were conducted to explore the relationships between internalized stigma, concealment, avoidant-orientation, approach-orientation, distress disclosure, and negative emotional disclosure.

Fifth, regression analyses were conducted to test specific pathways within the model, controlling for covariates detected through multivariate analyses and bivariate correlations.

Sixth, using the SPSS PROCESS macro (Hayes, 2013), one thousand bootstrap samples were used to create 95% bias corrected confidence intervals to test the significance of the

indirect relationship between internalized stigma and disclosure outcomes through avoidant orientation.

Seventh, hierarchical linear regression analyses were conducted to evaluate the extent to which level of internalized stigma, level of concealment, internalized stigma X concealment interaction, endorsement of avoidant-orientation and endorsement of approach-orientation collectively predict variation in disclosure of negative emotions and distress.

2.1.2 Results

2.1.2.1 Statistical Assumptions

Each primary composite variable was evaluated for normality of residuals and the presence of statistical outliers. Distribution of mean scores on variables including internalized stigma, avoidant-orientation, approach-orientation, distress disclosure, negative emotional disclosure, and current symptom distress each had a skewness statistic below +/- 1.0 and were not judged to be severely skewed based upon visual inspection of histograms and q-q plots.

However, mean scores of internalized stigma presented potential issues with statistical outliers. On the internalized stigma scale, four participants' mean scores ranging from 1.23 – 1.69 (2.53 to 2.66 *SD* below the mean) qualified as statistical outliers. However, the four participants' mean scores on the internalized stigma variable were included in the primary analyses given that: the outliers were few in number, the scores were not extreme (falling near the threshold cutoff of +/- 2.5 *SD*), neither the skewness statistic (-.537) or the visual display of the histogram and q-q plot were problematic, and the participants pattern of responses were consistent with the reverse coded internalized stigma item.

2.1.2.2 Descriptive Statistics

See Table 2 for a complete list of descriptive statistics pertaining to primary variables. The mean score for levels of internalized stigma fell slightly above the mid-point, between “neutral” and “somewhat true” ($M = 4.36$, $SD = 1.17$). On average, participants endorsed approach orientation ($M=4.50$, $SD= .89$) and avoidant orientation ($M = 4.52$, $SD = 1.22$) at a similar level, between “neutral” and “somewhat true”. In addition, participants’ responses on the measure of concealment ($M = 5.10$, $SD = 1.35$) suggest that on average participants reported that it is “somewhat true” to “true” that they conceal their mental health history from friends and others.

Participants on average fell below the neutral midpoint on distress disclosure, ($M = 3.32$, $SD = 1.30$) and willingness to disclose negative emotions to a close friend ($M = 3.63$, $SD = 1.32$), each falling between “somewhat untrue” and “neutral.”

Indicative of the extent to which the participants in the current sample were currently coping with mental health related symptoms, on average participants reported being “moderately” to “quite a bit” bothered or distressed by symptoms related to depression and anxiety over the course of the past 7 days ($M = 3.15$, $SD = .84$).

Table 2: Study 1 Descriptive Statistics

Measure	Scale	<i>M</i>	<i>SD</i>
Internalized Stigma	1 - 7	4.36	1.17
Concealment	1 - 7	5.01	1.35
Avoidant Orientation	1 - 7	4.52	1.22
Approach Orientation	1 - 7	4.50	0.89
Distress Disclosure	1 - 7	3.32	1.30
Emotional Disclosure - Negative	1 - 7	3.62	1.32
Emotional Disclosure - Positive	1 - 7	5.08	1.09
Symptom Distress	1 - 7	3.15	0.84
Self-esteem	1 - 4	2.21	0.59

2.1.2.3 Multivariate Analyses

Between-subjects multivariate analyses of variance were conducted to test for statistically significant mean differences on primary measures involved in the proposed model (internalized stigma, avoidant-orientation, approach-orientation, disclosure of negative emotions, distress disclosure, and concealment) across gender, previous hospitalization, relationship status, and diagnostic category. Results from multivariate analyses demonstrate no statistically significant mean differences on primary measures across gender ($p = .30$), previous hospitalization ($p = .20$) relationship status ($p = .84$), and diagnostic category ($p = .09$).

2.1.2.4 Bivariate Correlations

Bivariate correlations between symptom distress and length coping with mental illness and the primary variables involved in the proposed model were computed to detect potential additional covariates to be included in subsequent analyses. Current symptom distress was significantly correlated with internalized stigma ($r = .49, p < .001$) and avoidant orientation ($r = .47, p < .001$). As a result, current symptom distress was included as a covariate when testing the relationship between internalized stigma and avoidant-orientation. In culminating tests of

mediation, the indirect pathway through which internalized stigma predicts variation in disclosure outcomes was tested both with and without the inclusion of symptom distress as a covariate in order to best evaluate the role of current symptom distress within the proposed model. Statistically significant bivariate correlations between length of coping and variables of interest included only concealment ($r = -.19$). As a result, length of coping was added as covariate when evaluating pathway w in the model.

In order to begin to evaluate the extent to which pathways within the proposed model align with Study 1 hypotheses, bivariate correlations between primary constructs representing pathways of the model were evaluated for statistical significance. See Table 3 for the correlation matrix.

Hypothesis 1, represented in pathway c in the proposed model, predicts that internalized stigma is negatively correlated with disclosure of distress and negative emotions to a close friend. Results provide differential support for hypothesis 1. As predicted, internalized stigma was significantly and negatively correlated with disclosure of negative emotions ($r = -.25, p < .01$), however, not significantly correlated with disclosure of distress ($r = -.09, p = .30$).

Hypothesis 2a, represented by pathway a_1 in the model, proposes that internalized stigma is positively related to endorsement of avoidant orientation. In support of hypothesis 2, internalized stigma was significantly and positively correlated with avoidant orientation ($r = .56, p < .001$). A primary objective of Study 1 was to evaluate the extent to which internalized stigma is independently related to endorsement of avoidant-orientation while controlling for current symptom distress. Symptom distress was statistically significantly correlated with both internalized stigma ($r = .49, p < .001$) and avoidant-orientation ($.47, p < .001$) providing further

evidence for the importance of considering the role of current symptom distress. Providing support for path a_1 in the proposed model, the semi-partial correlation between internalized stigma and avoidant orientation when controlling for symptom distress was attenuated but remained statistically significant ($sr = .38, p < .001$).

With respect to pathway a_2 in the model, internalized stigma was not statistically significantly related to endorsement of approach-orientation ($r = -.15, p = .08$) providing further preliminary evidence that if stigma is related to relational processes, the relationship occurs through increased activation of avoidant-orientation as opposed to reduced activation of approach-orientation.

Hypothesis 3a, represented by pathway b_1 in the model, proposes that avoidant-orientation is negatively correlated with disclosure of distress and negative emotions. Results provide differential support for hypothesis 3. In support of hypothesis 3, avoidant-orientation was significantly and negatively correlated with disclosure of negative emotions ($r = -.22, p = .01$), however not statistically significantly correlated with distress disclosure ($r = -.14, p = .10$).

Hypothesis 3b, represented by pathway b_2 in the model, proposes that approach-orientation is positively correlated with disclosure of distress and negative emotions. In support of hypothesis 3b, approach-orientation was positively and significantly correlated with distress disclosure ($r = .23, p < .01$) and disclosure of negative emotions ($r = .22, p = .01$).

Table 3: Study 1 Bivariate Correlations

Variable	1	2	3	4	5	6	7	8	9	10
1. Internalized Stigma	1.00									
2. Concealment	0.37**	1.00								
3. Avoidant-Orientation	0.56**	0.08	1.00							
4. Approach-Orientation	-0.15	-0.14	0.00	1.00						
5. Distress Disclosure	-0.09	-0.34**	-0.14	0.23**	1.00					
6. Em. Disclosure - Negative	-0.25**	-0.28**	-0.22*	0.22*	0.70**	1.00				
7. Em. Disclosure - Positive	-0.12	-0.14	-0.09	0.29**	0.27**	0.42**	1.00			
8. Symptom Distress	0.49**	0.07	0.47**	-0.11	-0.11	-0.17	-0.18*	1.00		
9. Self-esteem	-0.60**	-0.11	-0.42**	0.18*	0.15	0.27*	0.13	0.19*	1.00	
10. Length of Coping	-0.11	-0.19*	-0.11	0.06	0.14	0.14	0.19*	-0.12	0.12	1.00

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

2.1.2.5 Testing pathways in the model within a regression framework

In order to test for the mediating role of avoidant-orientation within the proposed model, two pathways must be statistically significant. First, pathway a_1 representing the relationship between internalized stigma and avoidant-orientation, controlling for symptom distress. Second, Pathway b_1 , representing the relationship between avoidant-orientation and disclosure of negative emotions and distress. The following sections report results, within a regression framework, of tests of each pathway in the proposed model. Based upon the results from each individual pathway, the extent to which the avoidant-orientation mediates the relationship between internalized stigma and disclosure of negative emotions was tested.

2.1.2.5.1 Pathway c: Internalized Stigma and Disclosure of Negative Emotions and Distress

Level of internalized stigma predicted a statistically significant proportion of variation in willingness to disclose negative emotions to a close friend (5.7%), $F(1, 129) = 8.81, p < .01, R^2 = .064$, adjusted $R^2 = .057$. However, level of internalized stigma did not predict a statistically significant proportion of variation in distress disclosure (0.10%), $F(1,129) = 1.07, p = .30, R^2 = .008$, adjusted $R^2 = .001$.

2.1.2.5.2 Pathway a_1 and a_2 : Internalized Stigma and Friendship Orientation

Collectively, level of internalized stigma and level of symptom distress predicted a statistically significant proportion variation in avoidant-orientation (36%), $F(2,128) = 37.52, p < .001, R^2 = .37$, adjusted $R^2 = .36$. Independently, both level of internalized stigma, $b = .45, t(128) = 5.47, p < .001$, and level of symptom distress, $b = .38, t(128) = 3.22, p < .01$, predicted a significant proportion of unique variation in endorsement of avoidant-orientation.

Internalized stigma did not predict a statistically significant proportion of variation in approach-orientation (1.6%), $F(1,129) = 3.09, p = .08, R^2 = .023, \text{adjusted } R^2 = .016$.

2.1.2.5.3 Pathway *w*: Moderating Role of Concealment

Endorsement of avoidant-orientation was regressed on level of internalized stigma, level of concealment, and the internalized stigma X concealment interaction while controlling for symptom distress and length of coping in order to evaluate pathway *w*. Collectively, the set of predictors accounted for a significant proportion of variation in endorsement of avoidant-orientation (36.1%), $F(5,125) = 15.72, p < .001, R^2 = .39, \text{Adjusted } R^2 = .36$. However, only internalized stigma, $b = .50, t(125) = 5.49, p < .001$ and symptom distress, $b = .35, t(125) = 2.93, p < .01$ predicted a significant proportion of unique variation in endorsement of avoidant-orientation. Neither length of coping, $b = -.01, t(125) = -.74, p = .46$, level of concealment $b = -.01, t(125) = -1.77, p = .08$, or the internalized stigma X concealment interaction, $b = -.03, t(125) = -.58, p = .56$ significantly predicted a unique proportion of variation in endorsement avoidant-orientation. As a result, subsequent mediation analyses evaluating the extent to which avoidant-orientation mediates the relationship between internalized stigma and disclosure of negative emotions was completed without the inclusion of concealment.

2.1.2.5.4 Pathway *b*₁: Avoidant-Orientation and Disclosure

Avoidant-orientation predicted a statistically significant proportion of variation in willingness to disclose negative emotions, (3.9%), $F(1, 129) = 6.31, p = .01. R^2 = .047, \text{adjusted } R^2 = .039$. However, avoidant orientation did not predict a statistically significant proportion of

variation in level of distress disclosure (1.3%), $F(1, 129) = 2.75, p = .10, R^2 = .021$, adjusted $R^2 = .013$.

2.1.2.5.5 Pathway b2: Approach-Orientation and Disclosure

Approach orientation predicted a statistically significant proportion of variation in level of distress disclosure, (4.8%), $F(1, 129) = 7.50, p < .01, R^2 = .055$, adjusted $R^2 = .048$, and disclosure of negative emotions, (4.0%), $F(1, 129) = 6.35, p = .013, R^2 = .047$, adjusted $R^2 = .040$.

2.1.2.6 Mediation analyses

Based upon results from the aforementioned regression analyses, a statistically significant proportion of variation in willingness to disclose negative emotions was predicted by level of internalized stigma ($p < .01$) and endorsement of avoidant-orientation ($p = .01$). However, variation in disclosure of distress was not statistically significantly predicted by level of internalized stigma ($p = .30$) nor endorsement of avoidant-orientation ($p = .10$). As a result, only disclosure of negative emotions was appropriately eligible to evaluate within a mediation framework. Subsequent analyses evaluated the extent to which avoidant-orientation mediates the relationship between internalized stigma and disclosure of negative emotions. The first mediation analysis did not control for current symptom distress. The second mediation analysis did control for current symptom distress.

2.1.2.6.1 Internalized Stigma, Avoidant Orientation, and Disclosure of Negative Emotion

As can be seen in Figure 2, level of internalized stigma significantly and negatively predicted variation in disclosure of negative emotions (path c: $b = -.28, t(129) = -2.97, p < .01$,

95% CI [-.47, -.09]) and significantly and positively predicted variation in endorsement of avoidant-orientation (path a : $b = .58$, $t(129) = 7.77$, $p < .001$, 95% CI [.44, .73]).

When avoidant-orientation was included in the model as a mediator, the relationship between level of internalized stigma and willingness to disclose negative emotions was no longer statistically significant (path c' : $b = -.12$, $t(129) = -1.86$, $p = .06$, 95% CI [-.44, .01]). However, with internalized stigma in the model, the relationship between endorsement of avoidant-orientation and willingness to disclose negative emotions also became statistically non-significant ($b = -.12$, $t(129) = -1.04$, $p = .30$, 95% CI [-.34, .10]).

As a result, collectively, level of internalized stigma and endorsement of avoidant-orientation did predict a statistically significant, yet small, proportion of variation in willingness to disclose negative emotions (5.7%), $F(2,128) = 4.95$, $p = .01$, $R^2 = .072$, adjusted $R^2 = .057$. However, neither level of internalized stigma nor endorsement of avoidant-orientation uniquely predicted a statistically significant proportion of variation in willingness to disclose negative emotions.

Using the SPSS PROCESS macro (Hayes, 2013), one thousand bootstrap samples were used to create 95% bias corrected confidence intervals to test the significance of the indirect relationship between internalized stigma and willingness to disclose negative emotions through avoidant-orientation. The indirect relationship between level of internalized stigma and disclosure of negative emotions through endorsement of avoidant-orientation was statistically non-significant ($ab = -.07$, 95% CI [-.21, .07]), accounting for 24.02% of the total predicted variation.

Further examination of the bivariate correlation between internalized stigma and avoidant-orientation ($r = 0.56$) and the tolerance parameter associated with the two-predictor model that included internalized stigma and avoidant-orientation (tolerance = .681) suggests that the resulting statistically non-significant unique parameter estimates pertaining to level of internalized stigma and endorsement of avoidant-orientation were not the result of multicollinearity.

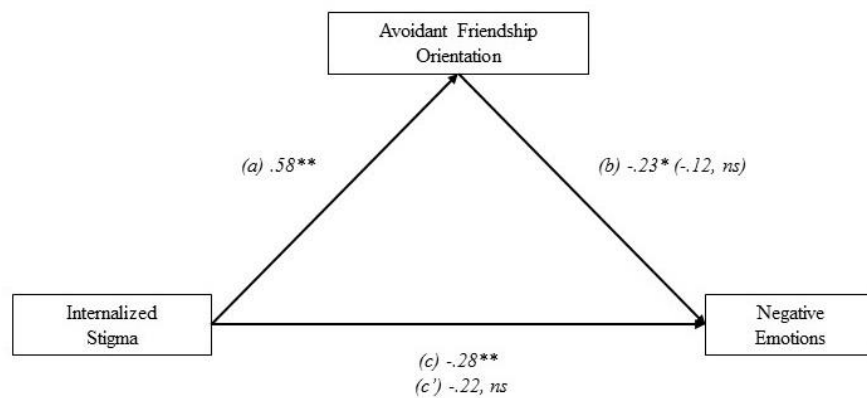


Figure 3: Mediation Model

A second mediation analysis was conducted controlling for symptom distress. As can be seen in Figure 3, level of internalized stigma uniquely and negatively predicted a statistically significant unique proportion of variation in disclosure of negative emotions when controlling for symptom distress (path c: $b = -.25$, $t(128) = -2.30$, $p = .02$, 95% CI [-.47, -.03]). In addition, level of internalized stigma significantly and positively predicted a unique proportion of variation in endorsement of avoidant-orientation while controlling for symptom distress (path a: $b = .45$, $t(128) = 5.47$, $p < .001$, 95% CI [-.29, -.62]).

When endorsement of avoidant-orientation was included in the model as a mediator, the relationship between level of internalized stigma and willingness to disclose negative emotions was no longer statistically significant (path c' : $b = -.20$, $t(126) = -1.67$, $p = .10$, 95% CI [-.44, .04]). However, with internalized stigma in the model, the relationship between endorsement of avoidant-orientation and willingness to disclose negative emotions also became statistically non-significant ($b = -.11$, $t(126) = -.91$, $p = .37$, 95% CI [-.34, .13]). As a result, collectively, level of symptom distress, internalized stigma and endorsement of avoidant orientation did predict a statistically significant proportion of variation in disclosure of negative emotions (5.1%), $F(3,127) = 3.32$, $p = .02$, $R^2 = .073$, adjusted $R^2 = .051$. However, neither level of internalized stigma, endorsement of avoidant orientation, or symptom distress uniquely predicted a statistically significant proportion of variation in willingness to disclose negative emotions.

Using the SPSS PROCESS macro (Hayes, 2013), one thousand bootstrap samples were used to create 95% bias corrected confidence intervals to test the significance of the indirect relationship between internalized stigma and willingness to disclose negative emotions through avoidant-orientation, controlling for symptom distress. The indirect relationship between level of internalized stigma and willingness to disclose negative emotions through endorsement of avoidant-orientation while controlling for symptom distress, was statistically non-significant ($ab = -.05$, 95% CI [-.16, .07]), accounting for 19.15% of the total predicted variation.

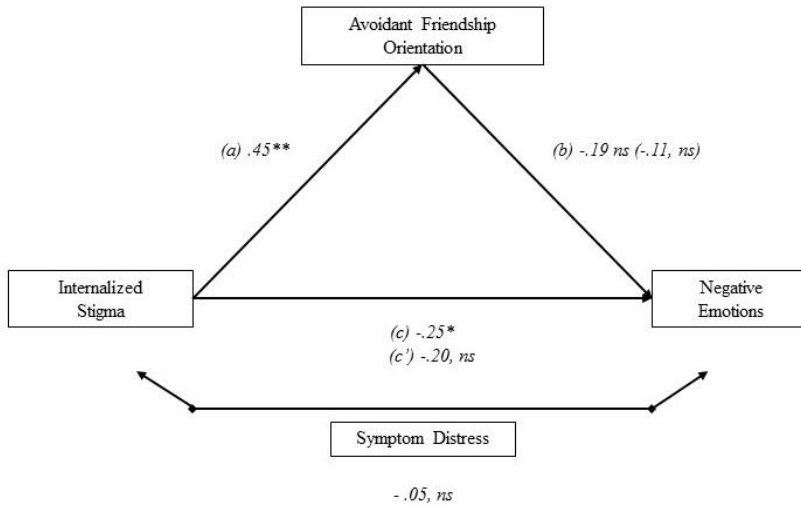


Figure 4: Mediation Model Controlling for Symptom Distress

2.1.3 Hierarchical Multiple Regression Analyses

Hierarchical linear regression analyses were conducted to further evaluate the predictive value of the sets of variables within the proposed model. In addition, the subsequent analyses differentiate from previous analyses through the inclusion of approach-orientation and concealment as predictors of disclosure of negative emotions and distress. Two separate hierarchical linear regression analyses were conducted to estimate the predictive value of the set of variables with respect to, first, willingness to disclose negative emotions and, second, distress disclosure.

2.1.3.1 Disclosure of Negative Emotions

A two-stage hierarchical linear regression analysis was conducted to evaluate the extent to which primary variables in the proposed model (internalized stigma, concealment, avoidant-orientation, and approach-orientation) predict variation in the willingness to disclose negative emotions to a friend. In the first block, level of internalized stigma, level of concealment, and

the level of internalized stigma X level of concealment interaction were simultaneously entered into the prediction model. In the second step, level of approach and level of avoidant-orientation were simultaneously added. Results of the hierarchical regression analysis are shown in Table 4. On the first step, when level of internalized stigma, level of concealment, and the internalized stigma X level of concealment were included, the prediction model accounted for a statistically significant proportion of variation in disclosure of negative emotions (9.0%), $F(3,127) = 5.26, p = .002, R^2 = .11, \text{ Adjusted } R^2 = .09$. Both level of internalized stigma, $b = -.21, t(127) = -2.01, p = .04, 95\% \text{ CI } [-.41, -.01], sr^2 = .031$, and level of concealment, $b = -.23, t(127) = -2.55, p = .01, \text{ CI } [-.41, -.05], sr^2 = .045$, uniquely predicted a significant proportion of variation in willingness to disclose negative emotions. However, as evidenced by the non-significant level of internalized stigma X level of concealment interaction ($p = .29$), the extent to which internalized stigma predicts variation in disclosure of negative emotions was not conditional upon level of concealment.

When endorsement of approach-orientation and avoidant-orientation were added in the second and final step, the prediction model showed a statistically significant increase in predicted variation, $F \text{ Change}(2, 125) = 3.23, p = .04, R^2 \text{ Change} = .044$. In the final model, collectively, level of internalized stigma, level of concealment, the internalized stigma X concealment interaction, endorsement of approach-orientation, and endorsement of avoidant-orientation predicted a statistically significant proportion of variation in willingness to disclose negative emotions (12.0%), $F(5,125) = 4.56, p = .001, R^2 = .15, \text{ Adjusted } R^2 = .12$. Only level of concealment, $b = -.23, t(125) = -2.60, p = .01, \text{ CI } [-.42, -.06], sr^2 = .046$, and approach orientation, b

= .25, $t(125) = -2.02$, $p = .045$, 95% CI [.01, .50], $sr^2 = .028$, uniquely predicted a significant proportion of variation in disclosure of negative emotions.

Table 4: Study 1 Hierarchical Regression Predicting Disclosure of Negative Emotions

Block	R ²	Model	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>Pearson r</i>	<i>sr</i> ²
1	0.111	Constant	3.664	0.115			
		Stigma*	-0.213	0.102	-0.190	-0.253	0.031
		Concealment*	-0.231	0.091	-0.237	-0.276	0.045
		Stigma X Concealment	-0.061	0.058	-0.950	0.029	0.007
2	0.154	Constant	3.660	0.113			
		Stigma	-0.068	0.123	-0.061	-0.253	0.002
		Concealment*	-0.236	0.091	-0.243	-0.276	0.046
		Stigma X Concealment	-0.054	0.057	-0.083	0.029	0.006
		Approach Orientation*	0.252	0.125	0.170	0.217	0.028
		Avoidant Orientation	-0.188	0.110	-0.174	-0.216	0.020

* $p < .05$, ** $p < .001$

2.1.3.2 Disclosure of Distress

A two-stage hierarchical linear regression analysis was conducted to evaluate the extent to which variables in the proposed model predict variation in the level of disclosure of distress. Results of the hierarchical regression analysis are shown in Table 5. On the first step, when level of internalized stigma, level of concealment, and the internalized stigma X level of concealment were included, the prediction model accounted for a statistically significant proportion of variation in disclosure of distress (9.3%), $F(3,127) = 5.46, p = .001, R^2 = .114, \text{Adjusted } R^2 = .093$. In the first step, only level of concealment, $b = -.23, t(127) = -2.55, p = .01, 95\% \text{ CI } [-.51, -.16], sr^2 = .100$, predicted a unique and statistically significant proportion of variation in disclosure of distress.

When endorsement of approach orientation and avoidant orientation were added in the second and final step, the prediction model showed a statistically significant increase in predicted variation, $F \text{ Change}(2, 125) = 5.60, p = .01, R^2 \text{ Change} = .073$. In the final model, collectively, level of internalized stigma, level of concealment, the internalized stigma X concealment interaction, endorsement of approach-orientation, and endorsement of avoidant orientation predicted a statistically significant proportion of variation in disclosure of distress (15.4%), $F(5,125) = 5.75, p < .001, R^2 = .187, \text{Adjusted } R^2 = .154$. In the final model, level of concealment, $b = -.35, t(125) = -3.93, p < .001, 95\% \text{ CI } [-.52, -.17], sr^2 = .100$, avoidant orientation, $b = -.25, t(125) = -2.34, p = .02, 95\% \text{ CI } [-.46, -.04], sr^2 = .035$, and approach orientation, $b = .31, t(125) = 2.59, p = .01, 95\% \text{ CI } [.07, .55], sr^2 = .044$, each predicted a unique and statistically significant proportion of variation in distress disclosure.

Table 5: Study 1 Hierarchical Regression Predicting Distress Disclosure

Block	R ²	Model	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>Pearson r</i>	<i>sr2</i>
1	0.114	Constant	3.319	0.113			
		Internalized Stigma	0.040	0.100	0.036	-0.091	0.001
		Concealment*	-0.337	0.089	-0.351	-0.336	0.100
		Internalized Stigma X Concealment	-0.002	0.057	-0.004	0.101	0.000
2	0.187	Constant	3.314	0.109			
		Internalized Stigma	0.229	0.119	0.207	-0.091	0.024
		Concealment**	-0.346	0.088	-0.360	-0.336	0.100
		Internalized Stigma X Concealment	0.007	0.055	0.011	0.101	0.000
		Approach Orientation*	0.312	0.121	0.214	0.234	0.044
		Avoidant Orientation*	-0.249	0.106	-0.233	-0.144	0.035

* $p < .05$, ** $p < .001$

2.1.4 Discussion

The primary aim for Study 1 was to evaluate the extent to which avoidant-orientation is one potential underlying mechanism through which the internalization of stigma impacts relational behavior, specifically the disclosure of distress and negative emotions to a close friend. In doing so, individual pathways within the proposed moderated-mediation model of stigma, avoidance and approach motivation, and disclosure were evaluated culminating in tests of mediation. The first hypothesis tested addressed the extent to which level of internalized stigma predicts variation in disclosure of negative emotions and distress to a close friend. Differential support was found for hypothesis 1. Level of internalized stigma predicted a statistically significant proportion of variation in disclosure of negative emotions to a close friend (5.7%). However, failing to support the first hypothesis, level of internalized stigma did not predict a statistically significant proportion of variation in disclosure of distress (0.10%).

The second hypothesis tested addressed the extent to which level internalized stigma predicts variation in endorsement of an avoidant-orientation, controlling for symptom distress. This pathway was of particular interest to Study 1. Past research focusing upon the impact of stigma on relationship related outcomes have not always controlled for current symptom distress. Taking into account symptom distress is important given that symptom distress accompanying depression and anxiety would motivate interpersonal regulation in an avoidant-oriented direction. Results demonstrated that internalized stigma uniquely predicted a statistically significant proportion of variation in avoidant-orientation when controlling for symptom distress ($sr^2 = .147$). In addition, symptom distress also uniquely predicted a

significant proportion of variation in avoidant orientation ($sr^2 = .051$), further supporting the importance of disentangling the impact that stigma has upon relational processes from the impact of symptomology.

The third hypotheses addressed the extent to which approach and avoidant-orientation predict variation in disclosure of negative emotions and distress to a close friend. Results provided differential support, as avoidant-orientation significantly predicted variation in willingness to disclose negative emotions but not distress.

The fourth hypothesis predicted that level of concealment would moderate the relationship between level of internalized stigma and avoidant orientation. Results did not support this hypothesis. Results demonstrate that the relationship between internalized stigma and avoidant-orientation was statistically significant at average, relatively high, and relatively low levels of concealment. In addition, results from the moderation analysis and bivariate correlations suggest that level of concealment was unrelated to endorsement of avoidant-orientation ($r = .07$).

The fifth hypothesis predicted that the relationship between internalized stigma and disclosure of negative emotions and distress would be mediated by avoidant-orientation. The results failed to support the role of avoidant-orientation as a mediating mechanism through which the relationship between internalized stigma and disclosure of negative emotions could be explained indirectly. Internalized stigma directly predicted a statistically significant, yet small, proportion of variation in disclosure of negative emotions ($R^2 = .064$). As a result, although avoidant orientation, when included in the model as a mediator, accounted for 24% of the total relationship between internalized stigma and willingness to disclose negative

emotions, the amount of variation accounted for by avoidant-orientation was small and statistically non-significant.

Following tests of mediation, primary variables within the model were included in a two-stage hierarchical regression analysis predicting disclosure of negative emotions and distress. The inclusion of level of concealment and approach-orientation as predictors of willingness to disclose negative emotions and distress alongside internalized stigma and avoidant-orientation was a benefit of the hierarchical regression analyses. In previous mediational tests of the model, level of concealment was proposed to play solely a moderating role in level of endorsement of avoidant-orientation and the endorsement of approach-orientation was not included. With respect to willingness to disclose negative emotions, in the final prediction model level of concealment and endorsement of approach orientation each uniquely predicted a statistically significant proportion of variation. With respect to disclosure of distress, in the final prediction model, level of concealment, approach-orientation, and avoidant-orientation each uniquely predicted variation. These results provide preliminary evidence for the potential role of concealment in influencing the extent to which people coping with mental illness are willing to disclose a wider range of negative emotions and distress that are not entirely reflective of symptoms experienced when coping with depression and, or, anxiety. In addition, results from Study 1 provide stronger evidence for the extent to which approach-orientation positively predicts willingness to disclose negative emotions in comparison to the hypothesized role of avoidant-orientation as a motivational mechanism that inhibits disclosure.

Overall, results from Study 1 do not provide support for avoidant-orientation as a potential mediating mechanism through which the relationship between internalized stigma and disclosure of negative emotions and distress to a friend can be explained. However, results supported the hypothesis that the relationship between internalized stigma and avoidant-orientation remains when controlling for current symptom distress. In addition, results from Study 1 did provided preliminary evidence for the potential role that approach-orientation and level of concealment of mental health history play in willingness to disclose negative emotions and distress. Participants who more strongly reported concealing their mental health history from friends and others were also less willing to discuss distress and negative emotions with friends. This is particularly interesting given that the items on measures of willingness to disclose negative emotions and distress transcended specific emotions and distress directly associated with symptoms associated with depression or anxiety related disorders. However, that being said, this study was not designed in a way to determine that the reduction in willingness to disclose negative emotions and distress can be attributed to concerns about revealing or discussing participants' mental illness.

3. Study 2: Overview and Purpose

The purpose Study 2 was to experimentally test components of the proposed moderated-mediation model of avoidance and approach motivation and disclosure (*see figure 3*). Situational salience of stigma versus support was manipulated experimentally along with the inclusion of a control condition. The experimental manipulation of situational stigma or support involved asking participants to write about a time that a friend either excluded them (stigma condition) or supported them (support condition) after their friend found out about his or her mental illness. Following the experimental manipulation participants were given a hypothetical social scenario where they were asked to make a connection with a hypothetical person in the service of forming a friendship. Endorsement of avoidant-oriented and approach-oriented friendship goals for the hypothetical interaction and willingness to self-disclose varying degrees of personal information to the hypothetical potential friend were measured. To measure willingness to self-disclose personal information and experiences, participants received a list of discussion items that varied in degree to which personal self-disclosure would be required. Unknown to the participants, discussion topics were categorized as either closeness-generating topics or small-talk topics. Participants first reported their willingness to discuss each topic and, second, the depth at which they were willing to discuss each topic. In addition, participants selected 10 of the topics they would most like to discuss with the hypothetical interaction partner in order to form a close connection. The current study tested 5 hypotheses, each of which addressing either a direct or indirect pathway within the proposed model.

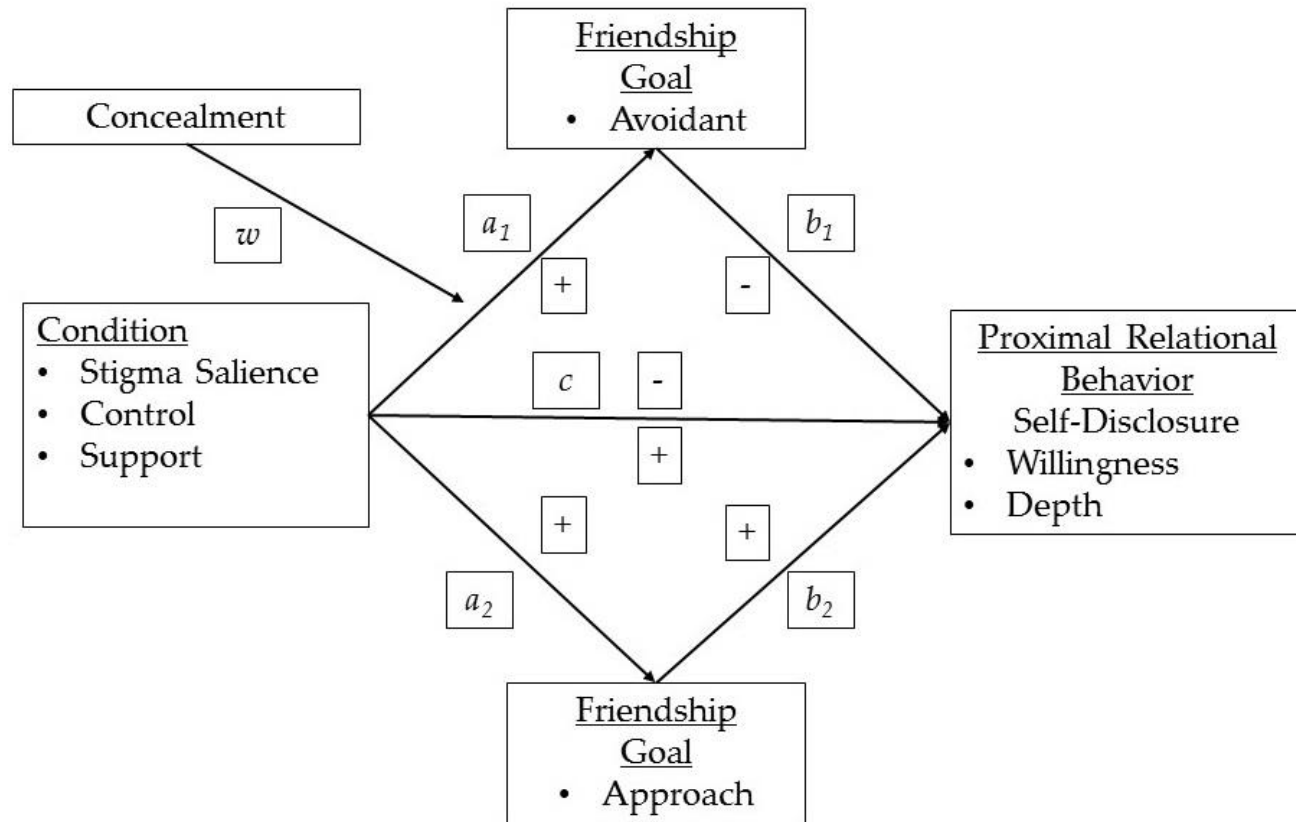


Figure 5: Study 2 Moderated-Mediation Model

3.1 Hypotheses

Hypothesis 1 addresses path c within the proposed model. Path c hypothesizes that on the closeness generating items, participants in the stigma condition will report on average less general willingness and on average less willingness to discuss topics deeply with the hypothetical person and select on average a lower number of closeness generating items (out of ten) in comparison to the support and control condition.

Hypothesis 2a addresses path a_1 within the proposed model. Path a_1 hypothesizes that participants receiving the stigma prime will on average more highly endorse avoidant-oriented friendship goals for the hypothetical interaction in comparison to the control and support conditions.

Hypothesis 2b addresses path a_2 within the proposed. Path a_2 hypothesizes that participants receiving the support prime will on average more highly endorse approach-oriented friendship goals for the hypothetical interaction in comparison to the control and stigma condition.

Hypothesis 3a addresses the moderating pathway w_1 . Path w_1 hypothesizes that the main effect of condition on avoidant-oriented friendship goal endorsement will be conditional upon level of concealment.

Hypothesis 4a addresses path b_1 within the proposed model. Path b_1 hypothesizes that level of endorsement of avoidant friendship-goals will negatively predict overall willingness to discuss closeness generating items, willingness to discuss closeness generating items deeply, and the number of closeness generating items selected.

Hypothesis 4b addresses path b_2 within the proposed moderated-mediation model. Path b_2 hypothesizes that, level of endorsement of approach-oriented friendship goals will positively

predict general willingness to discuss closeness generating items, willingness to discuss closeness generating items deeply, and the number of closeness generating items selected.

Hypothesis 5a addresses the indirect pathway, ab_1 , through which avoidant-oriented friendship goals mediates the main effect of experimental condition on willingness, depth, and number of topics selected with respect to closeness generating topics. Path ab_1 hypothesizes that the main effect of condition on general willingness, depth, and number of topics selected with respect to closeness-generating topics will be significantly mediated by endorsement of avoidant-orientation friendship goals.

Hypothesis 5b addresses the indirect pathway, ab_2 , through which approach-oriented friendship goals mediates the main effect of experimental condition on willingness, depth, and number of topics selected with respect to closeness generating topics. Path ab_1 hypothesizes that the main effect of condition on willingness, depth, and number of topics selected with respect to closeness-generating topics will be significantly mediated by endorsement of approach-orientation friendship goals.

3.1.1 Method

3.1.1.1 Recruitment

An a priori power analysis was run based upon the expected effect of the stigma manipulation on avoidant-oriented friendship goals. Past research using a similar stigma manipulation and measuring a more general avoidant friendship orientation measure resulted in a Cohen's d effect size of .28 (Lattanner & Richman, 2016). Oyserman and colleagues (2007) study of priming stigmatized identity in order to activate prevention oriented goals resulted in a Cohen's d effect size of .41. In the current study the manipulation was strengthened by

having the participants write about how the stigmatizing or supportive experience made them feel and listing emotional reactions commonly tied to internalized stigma or social support. In order to achieve a level of power of .80, expecting a small to medium Cohen's f effect size ($f = .15$) with a three-level categorical predictor variable and one potential covariate, according to G*Power the estimated necessary sample size for the study was 432 participants.

A panel of participants with a history of mental illness were recruited to complete Study 2. TurkPrime, the company that recruited the sample of participants, was given the following items to use as inclusion criteria for the panel: "have you ever been diagnosed with a mental illness" (yes/no) and "are you currently experiencing any mental health problems that significantly affect your life" (yes/no). To be included in the panel participants had to respond "yes" to both items. The sample of participants who met the aforementioned criteria and completed Study 2 included 533 participants. Participants were compensated by TurkPrime at differential levels of compensation.

3.1.1.2 Participants

A community sample of 533 participants, 18 years of age or older who were initially screened for having been diagnosed with a mental illness and currently experiencing a mental health problem(s) that significantly impacts his or her life were eligible for inclusion into the panel. Participants completed Study 2 between October 28, 2016 and January 9, 2017². The final

² Before composite variables were computed data was screened for quality. The primary indicator of data quality involved evaluating time spent completing the entire study. Participants were told that the study would take about 20-25 minutes to complete. Completion time was screened for statistical outliers (± 2.5 standard deviations). Employing an iterative process of detecting and removing statistical outliers, 78 participants were removed from

sample included in the primary analyses consisted of 413 participants, 63.2% female, predominantly Caucasian (84.3%), and on average 41.07 ($SD = 13.55$) years old. Participants reported residing in 48 different states across the United States. Most participants reported being employed full time or part time (45.8%), 11.1% were unemployed, 19.9% were on disability due to his or her mental health, 10.2% were retired, 9.0% were full time home-makers, and 4.1% were students. For relationship status, 31.0% reported being married, 28.3% in a relationship or dating, 26.9% single, and 13.8% divorced or separated.

On average, participants had been coping with mental illness for 18.92 ($SD = 12.70$) years, 45.5 % of participants reported a history of hospitalization because of his or her mental illness, 80.1% reported currently taking medication for his or her mental illness, and 49.9% of reported currently participating in therapy or counseling. For, diagnostic criteria, 70.2% of participants reported coping with both a mood and an anxiety related disorder, 13.8% of participants reported coping with only a mood disorder, 9.4% of participants reported coping

primary analyses based on completion times. Participants in the final sample completed the study on average in 23.14 ($SD = 6.58$) minutes with a minimum completion time of 10.12 minutes and a maximum of 39.53 minutes. In addition, 29 participants assigned to the stigma condition reported never having experienced exclusion from friends because of his or her mental illness, and 13 participants assigned to the social support condition reported never having experienced support from friends because of his or her mental illness. For these, 42 participants, the experimental condition was irrelevant and most often wrote about experiences that would be consistent with an alternative condition. As a result screening participant completion time and completion of the experimental manipulation, 120 participants were removed from the final sample included in the primary analyses. Analyses were also completed with the initial sample of 533 participants. Results from analyses involving the initial sample of participants were consistent with results reported.

with only an anxiety related disorder, and 6.5% reported coping with a schizophrenia related disorder.

See Table 6 for a complete summary of sample demographic characteristics and background information.

Table 6: Study 2 Sample Characteristics

Characteristic	Mean (SD) or % (n)
<i>Age</i>	41.07 (13.6)
<i>Years coping with mental illness</i>	18.92 (12.70)
<i>Gender</i>	
Male	36.8% (152)
Female	63.2% (261)
<i>Ethnicity</i>	
White	84.3% (348)
Black	5.3% (22)
Hispanic	2.9% (12)
Asian	1.5% (6)
Native American	0.2% (1)
Italian	0.5% (2)
Multi-racial	5.3% (22)
<i>Relationship Status</i>	
Married	31% (128)
In a relationship or Dating	28.3% (117)
Single	26.9% (111)
Divorced or Separated	13.8% (57)
<i>Employment Status</i>	
Employed (full-time or part-time)	45.8% (189)
Unemployed	11.1% (46)
On disability due to mental health	19.9% (82)
Retired	10.2% (42)
Full-time home-maker	9.0% (37)
Student	4.1% (17)
<i>Type of Psychological Difficulties</i>	
Mood disorder	13.8% (57)
Anxiety disorder	9.4% (39)
Mood and Anxiety disorder	70.2% (290)
Psychotic disorder	6.5% (27)
<i>Past Hospitalization</i>	45.5% (188)
<i>Current Treatment</i>	
Counseling / Therapy	49.9% (206)
Medication	80.1% (312)

3.1.1.3 Study Design, Manipulation, and Measures

3.1.1.3.1 *Experimental condition*

At the onset of the study, participants were randomly assigned to one of three conditions which included a stigma exclusion condition, a social support condition, or a neutral control condition. Participants assigned to the stigma exclusion and the support condition were told that the purpose of the first portion of the study was to learn more about their experiences of revealing their mental illness to friends. Participants assigned to the neutral control condition were told that in the first portion of the study they would engage in a writing task.

Participants in the *stigma condition* were first asked to rate the extent to which they have experienced four different exclusionary events when a friend learned about his or her mental illness (i.e., a friend acted as if I was inferior; a friend did not want to hang out with me; a friend became more distant; a friend seemed uncomfortable around me). Second, participants were asked to select one of the experiences they reported encountering most often and describe the experience as it occurred. Participants were specifically asked to describe what happened and how it made them feel. Participants were also given the opportunity to report if they had never encountered any of the listed exclusionary experiences.

Participants in the *support condition* were first asked to rate the extent to which they have experienced four different supportive events when a friend learned about his or her mental illness (i.e., friends supported me; friends expressed concern for me; friends did not treat me any differently; friends understood what I was going through). Second, participants were asked to select one of the experiences they reported encountering most often and describe the

experience as it occurred. Participants were specifically asked to describe what happened and how it made them feel. Participants were also given the opportunity to report if they had never encountered any of the listed supportive experiences. Participants in the control condition were asked to write about the room that they are in.

3.1.1.3.2 Friendship formation Scenario

Following the experimental manipulation phase, participants were told that the purpose of second portion of the study is to better understand the ways in which friendships are formed between people who are getting to know each other for the first time. Participants were given the following prompt and hypothetical social scenario;

When we meet someone new our goal is often to establish a close connection. In doing so, we discuss a range of topics that vary in level of personal disclosure. We believe that the best way to establish a connection is to share personal information with each other.

Imagine that you have recently met a person that you would like to become friends with. You are now having a chat with his person, and you would like them to get to know you better. Next, you will see a list of topics that you could discuss back and forth with your new acquaintance.

Disclosing personal information about oneself to a potential new friend can be beneficial, leading to connection and the development of a close friendship. However, disclosing personal information about oneself to a new friend can be risky, leading to embarrassment, discomfort, negative evaluation.

3.1.1.3.3 Avoidant and Approach-Oriented Friendship Goals

Participants completed the 8-item Approach-Oriented and Avoidant-Oriented Relationship Goal measure (Elliot, Gable, & Mapes, 2006), adapted to the hypothetical social scenario. For each goal-oriented item participants responded to the following prompt; “while

getting to know this person I will be trying to..." on a 7-point Likert scale (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). Items pertaining to avoidant-oriented friendship goals included; I will be trying to avoid disagreements and conflicts; I will be trying to stay away from discussion topics that could harm our connection; I will be trying to avoid getting embarrassed; I will be trying to make sure nothing bad happens. Items pertaining to approach-oriented friendship goals included; I will be trying to deepen my connection; I will be trying to move towards growth and development of our connection; I will be trying to enhance our bond; I will be trying to share many fun and meaningful experiences. In Study 2, the reliability of the avoidant-oriented friendship goals scale was ($\alpha = .79$) and for approach-oriented friendship goals ($\alpha = .89$). See Appendix I.

3.1.1.3.4 Disclosure Topics

After completing the approach and avoidant-oriented goal measure, participants rated both their general willingness and the depth at which they would be willing to discuss 40 different topics with the person in the hypothetical friendship formation scenario. The topics were taken from Aron, Wlinat, Aron, Vallone, & Bator's (1997) interpersonal closeness generating task and range in level of potential or required self-disclosure. Of the 40-items, 20 items classified as small-talk items, involving less intimate topics of disclosure (e.g., what is your favorite holiday, why?; what did you do this past summer?). The other 20 items are classified as closeness-generating items, involving more intimate topics (what does friendship mean to you?; If you could change anything about the way you were raised, what would it be?).

Past research has shown that participants who have discussed close talk items during a laboratory based interaction on average report a closer connection to their interaction partner in comparison to participants who discussed the small talk items (Aron, Wlinat, Aron, Vallone, & Bator, 1997).

For each item, participants first reported their willingness discuss each item (1 = very unwilling, 2 = unwilling, 3 = somewhat unwilling, 4 = neutral, 5 = somewhat willing, 6 = willing, 7 = very willing). In Study 2, the reliability of closeness generating – willingness was ($\alpha = .95$) and small talk – willingness was ($\alpha = .93$). Second, participants reported the depth at which they would be willing to discuss each item (1 = not at all deeply, 2 = slightly deeply, 3 = moderately deeply, 4 = deeply, 5 = very deeply). In Study 2, the reliability of closeness-generating - depth was ($\alpha = .96$) and small-talk – depth ($\alpha = .96$). Third, participants were presented with the entire list of randomly ordered items and asked, "...select the 10 topics that you would most want to discuss with this person in order to establish a close connection". See Appendix J.

<i>3.1.1.3.5 Mental health history</i>
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Following the friendship formation phase, participants completed a series of measures related to their mental health history, level of internalized stigma, level of concealment, demographics, and self-esteem. In regards to mental health history, participants reported the type(s) of psychological difficulties that led them to be diagnosed with a mental illness. Participants also reported if they had been hospitalized because of his or her mental illness, if they are currently taking medication for his or her mental illness, if they are currently

participating in therapy because of his or her mental illness, the number of years that they have been coping with a mental illness, and their current level of symptom distress.

3.1.1.3.6 Internalized Stigma

As in Study 1, participants completed a measure of internalized stigma comprising of items across commonly used internalized stigma measures. The items included specifically targeted negative feelings about the self as a result of being diagnosed with a mental illness. The measure included, five items from the Berger HIV Stigma Scale – negative self-image subscale (Berger, Ferrans, & Lashley, 2001; $\alpha = .87$); four items from the Internalized Stigma of Mental Illness Scale – alienation subscale (Ritsher, Otilingam, & Grajales, 2003; $\alpha = .78$); Four items adapted from Link’s (1987) Devaluation-Discrimination (Quinn, et al., 2014; $\alpha = .78$). Participants responded to each item on a 7 point scale (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true). In Study 2, the reliability of the internalized stigma measure was ($\alpha = .88$). See Appendix A.

3.1.1.3.7 Concealment

Participants completed 4 items from the adapted version of Disclosure Subscale of the Berger HIV Stigma Scale (Berger, Ferrans, & Lashley, 2001; “In general, I tend to conceal my mental illness from friends.”; “I am very careful who I tell that I have a mental illness”; In many areas of my life, no one knows that I have a mental illness; I never feel the need to hide the fact that I have a mental illness from my friends”). Participants responded to each item on a 7-point scale (1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true,

7 = very true). In Study 2, the reliability of the concealment measure was ($\alpha = .77$). See Appendix B.

3.1.1.3.8 Symptom distress

Participants completed 22 items taken from the Symptom Checklist (SCL-90R; Derogatis, Lipman, & Covi, 1973), 12 items from the depression subscales and 10 items from the anxiety subscale. Each item on this scale asked participants to report psychological distress experienced within the past week and is scored on a 5-point scale of distress (1 = not at all, 2 = a little bit, 3 = moderately, 4 = quite a bit, 5 = extremely). In Study 2, the reliability of the symptom distress measure was ($\alpha = .95$). See Appendix H.

3.1.1.3.9 Self-esteem

Participants completed the 10-item Rosenberg Self-esteem Scale that measures global self-worth by measuring both positive and negative feelings about the self. All items were answered using a 4-point Likert scale format ranging from (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). In Study 2, the reliability of the self-esteem measure was ($\alpha = .92$). See Appendix G.

3.1.1.3.10 Demographics

Participants completed background demographic information pertaining to their age, relationship status, employment status and race/ethnicity.

3.1.1.4 Statistical Analyses

First, prior to completing primary data analyses, all variables were evaluated for violations of the statistical assumption of normality of residuals, as well as for the detection of statistical outliers ($\pm 2.5 SD$ from mean). Two categories of criteria were evaluated in order to address the extent to which the assumption of normality of residuals was met for each variable. First, descriptive statistics of skewness and kurtosis were evaluated for values ± 1.00 (George & Mallery, 2003). Second, histograms and normal q-q plots were evaluated visually to detect severe departures from normality.

Second, bivariate correlations were run to explore the relationships between avoidant-oriented friendship goals, approach-oriented friendship goals, level of concealment, willingness to discuss closeness-generating topics, willingness to discuss closeness-generating topics deeply, number of closeness-generating topics selected, willingness to discuss small-talk topics, and willingness to discuss small-talk topics deeply. In addition, correlations were conducted between aforementioned variables and potential covariates including symptom distress and length of coping with mental illness.

Fourth, multivariate analyses were run to detect significant mean differences on primary criterion variables across categorical variables including gender, relationship status, and diagnostic category. Categorical variables that demonstrated statistically significant mean difference across levels on primary criterion variables were included as covariates in subsequent primary analyses.

Fifth, primary analyses were run within a regression framework, allowing for inclusion of both categorical and continuous predictor and covariate variables. Given the presence of three

experimental conditions, experimental condition was dummy coded. The stigma condition was designated as the reference condition for ease of interpretation. In addition, covariates were selected for inclusion in each analysis based upon results of correlational and multivariate analyses. The multiple regression analyses were run in the following progression.

Sixth, multiple regression analyses were conducted to test pathway *c* in the model, focusing on outcomes including closeness generating-willingness, closeness generating-depth, closeness generating-selected, small talk-willingness, and small talk-depth. To test the effect of experimental condition on closeness-generating criterion variables, closeness-generating criterion variables were regressed on experimental condition (stigma, control, support; dummy coded) and symptom distress (mean-centered). In addition, to test the effect of experimental condition on small-talk criterion variables, small-talk criterion variables were regressed on experimental condition (stigma, control, support; dummy coded) and covariates including gender (male, female; dummy coded) and symptom distress, when appropriate.

Seventh, multiple regression analyses were conducted to test pathways *a* and *w*, which collectively addressed main effect of experimental condition, the main effect of level of concealment, and the experimental condition X concealment interaction on avoidant-oriented friendship goal endorsement. To do so, avoidant-oriented friendship goals was regressed on symptom distress (mean-centered), experimental condition (stigma, control, support; dummy coded), level of concealment (mean-centered), and the experimental condition X level of concealment interaction.

Eighth, hierarchical linear regression analyses were conducted to evaluate the extent to which level of internalized stigma, level of concealment, internalized stigma X concealment

interaction, endorsement of avoidant-oriented friendship goals and endorsement of approach-oriented friendship goals collectively predict variation in closeness-generating criterion variables.

3.1.2 Results

3.1.2.1 Statistical Assumptions

See Table 7 for a complete summary of sample statistics evaluating normality of residuals and detection of outliers. With respect to statistical outliers, 15 mean scores on the internalized stigma scale, twenty scores on the approach-oriented goals scale, 5 mean scores on willingness to discuss closeness-generating items, and 12 mean scores on the concealment scale qualified as statistical outliers, falling more than +/- 2.5 standard deviations from the mean. Statistical outliers on the aforementioned variables were removed from subsequent analyses.

Table 7: Study 2 Descriptive Statistics Addressing Assumption of Normality of Residuals and Statistical Outliers

Variable	Full sample				Outliers removed		
	Outliers	Skew	Std. Error	Kurtosis	Skew	Std. Error	Kurtosis
Avoidant Goals	15.00	-0.78	0.12	0.68	-0.31	0.12	0.64
Approach Goals	20.00	-0.88	0.12	1.24	-0.12	0.12	-0.71
Closeness - Willingness	5.00	-0.40	0.12	-0.30	-0.29	0.12	-0.50
Small Talk - Willingness	17.00	-1.09	0.12	2.15	-0.35	0.12	0.60
Closeness - Depth	0.00	0.28	0.12	-0.79			
Small Talk - Depth	0.00	-0.08	0.12	-0.67			
Closeness - Selected	0.00	0.21	0.12	-0.89			
Concealment	12.00	-0.69	0.12	0.10	-0.42	0.12	0.51
Symptom Distress	0.00	-0.11	0.12	-0.66			
Internalized Stigma	0.00	-0.39	0.12	-0.59			

3.1.2.2 Descriptive Statistics

See Table 8 for a complete summary of sample descriptive statistics pertaining to primary variables. Participants endorsed avoidant-oriented friendship goals ($M=5.47$, $SD= 1.0$) and approach-oriented friendship goals ($M = 5.45$, $SD = .93$) for the hypothetical social scenario at a level between somewhat true and true. Participants endorsed a lower level of willingness to discuss closeness-generating items ($M=4.74$, $SD= 1.21$) in comparison to small-talk items ($M = 5.78$, $SD = .78$). The mean difference in willingness to discuss closeness-generating items as compared to small-talk items was statistically significant $t(393) = 18.81$, $p <.001$.

Participants endorsed a lower level of willingness to discuss closeness-generating topics deeply ($M=2.90$, $SD= .97$) in comparison to small-talk items ($M = 3.26$, $SD = .98$). The mean difference in willingness to discuss deeply closeness generating items as compared to small-talk items was statistically significant $t(412) = 52.64$, $p <.001$. When given the opportunity to select 10 topics to discuss, participants on average selected 4.3 ($SD = 2.84$) closeness generating items. Selecting on average 4.3 items out of 10 was statistically significantly different from what would be expected on average if there was no effect of topic type on topic selection, $t(412) = -5.00$, $p <.001$.

Responses on the measure of concealment ($M = 5.06$, $SD = 1.39$) suggest that it is “somewhat true” that participants conceal their mental health history from friends and others. Responses on symptom distress scale suggest that participants were currently coping with symptoms of depression and anxiety between levels of, “moderately” to “quite a bit” over the course of the past 7 days ($M = 3.2$, $SD = .91$).

Table 8: Study 2 Descriptive Statistics by Condition

Measure	Condition									
	N	Scale	Stigma		Control		Support		Total	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Avoidant-Oriented Goals	397	1 - 7	5.47	1.05	5.50	1.04	5.45	0.95	5.47	1.01
Approach-Oriented Goals	393	1 - 7	5.39	0.92	5.43	0.93	5.52	0.95	5.45	0.93
Closeness Generating - Willingness	408	1 - 7	4.61	1.14	4.74	1.21	4.86	1.28	4.74	1.21
Small Talk - Willingness	396	1 - 7	5.79	0.76	5.72	0.79	5.80	0.78	5.77	0.78
Closeness Generating - Depth	413	1 - 5	2.74	0.92	2.95	0.96	3.00	1.04	2.90	0.98
Small Talk - Depth	413	1 - 5	3.25	0.92	3.21	0.99	3.33	1.00	3.26	0.97
Closeness Generating - Selected	413	1 - 10	4.02	2.89	4.44	2.71	4.41	2.92	4.30	2.84
Concealment	401	1 - 7	5.24	1.14	4.91	1.28	5.03	1.31	5.06	1.25
Symptom Distress	413	1 - 5	3.36	0.85	3.14	0.92	3.12	0.93	3.20	0.91
Internalized Stigma	413	1 - 7	4.43	1.22	3.91	1.34	4.00	1.33	4.10	1.32

3.1.2.3 Multivariate Analyses

In order to assess potential significant mean differences in primary disclosure outcomes across gender, relationship status, and diagnostic category between-subjects multivariate and univariate analyses of variance were conducted. Results demonstrated no statistically significant mean differences on avoidant-oriented friendship goals, approach-oriented friendship goals, closeness-generating-willingness, closeness-generating - depth, and number of closeness-generating items across gender, relationship status, or diagnostic category.

3.1.2.4 Bivariate Correlations

See Table 9 for a complete summary of bivariate correlations between primary variables. Scores on the avoidant-oriented friendship goal scale were significantly negatively correlated with closeness-generating -willingness ($r = -.12, p = .02$) small-talk-willingness ($r = .12, p <.01$), and number of closeness-generating items selected ($r = -.14, p <.001$). However, endorsement of avoidant-oriented goals was not significantly correlated with closeness-generating-depth ($r = -.08, p = .10$) nor small-talk depth ($r = .07, p = .17$). Approach-oriented friendship goals were significantly positively correlated with each of the disclosure outcomes; closeness-generating -willingness ($r = .44, p <.001$), small-talk willingness ($r = .36, p <.01$), closeness generating-depth ($r = .37, p <.001$), small-talk depth ($r = .29, p <.001$), and number of closeness-generating items selected ($r = .239, p <.001$).

Symptom distress was significantly correlated with avoidant-oriented friendship goals ($r = .12, p = .02$), closeness-generating-willingness ($r = -.10, p = .046$), small-talk depth ($r = .10, p = .04$), and level of concealment ($p = .21, p <.001$).

Internalized stigma was significantly correlated with avoidant-oriented friendship goals ($r = .28, p < .001$), closeness-generating-willingness ($r = -.17, p = .001$), and closeness-generating-depth ($r = -.11, p = .03$). However, internalized stigma was not statistically significantly correlated with small-talk-willingness ($r = -.02, p = .67$), small talk- depth ($r = -.001, p < .99$), nor number of closeness-generating topics selected ($r = -.09, p = .08$).

Table 9: Study 2 Bivariate Correlations

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Avoidant Goals	1.00											
2. Approach Goals	0.29**	1.00										
3. Closeness - Willingness	-0.12*	0.44**	1.00									
4. Small-Talk - Willingness	0.12*	0.36**	0.60**	1.00								
5. Closeness - Depth	-0.08	0.37**	0.84**	0.45**	1.00							
6. Small-Talk - Depth	0.07	0.29**	0.47**	0.67**	0.61**	1.00						
7. Closeness-Gen Selected	-0.14**	0.24**	0.56**	0.07	0.52**	0.05	1.00					
8. Concealment	0.29**	0.00	-0.21**	0.04	-0.20**	0.00	-0.16**	1.00				
9. Symptom Distress	0.12*	-0.01	-0.10*	0.02	0.02	0.10*	-0.03	0.21**	1.00			
10. Internalized Stigma	0.28**	0.01	-0.17**	-0.02	-0.11*	0.00	-0.09	0.44**	0.53**	1.00		
11. Self-esteem	-0.14**	0.08	0.24**	0.05	0.17**	0.04	0.10*	-0.25**	-0.58**	-0.64**	1.00	
12. Length of coping	-0.05	-0.06	0.09	0.04	-0.01	-0.05	0.08	-0.04	-0.23**	-0.10*	0.11	1.00

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

3.1.2.5 Effect of Condition on Goal Endorsement and Disclosure

3.1.2.5.1 Effect of Condition on Willingness to Discuss Closeness-Generating Items

A multiple linear regression analysis was conducted to evaluate the extent to which experimental condition (dummy coded) affected variation in willingness to discuss closeness-generating items controlling for symptom distress (mean-centered). Data conformed to the assumption of homogeneity of variance as the Levene’s Test of Equality of Error Variances was not statistically significant ($p = .62$). With respect to including symptom distress as a covariate, the data conformed to the assumptions of linearity of regression (a linear relationship was observed between symptom distress and close talk-willingness) and homogeneity of regression (the experimental condition X symptom distress interaction effect was not statistically significant, $F(2, 402) = .001, p = .99$).

As seen in Table 10, experimental condition (dummy-coded) and symptom distress (mean-centered) did not predict a statistically significant proportion of variation in willingness to discuss closeness-generating items, $F(3, 404) = 1.59, p = .19, R^2 = .012, \text{Adjusted } R^2 = .004$.

Table 10: Effect of Condition on Willingness to Discuss Closeness-Generating Topics

Variable	Closeness-Generating Topics - Willingness					
	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	95% CI
Constant (stigma)	4.63	0.11		42.56	0.00	4.41 4.84
Symptom Distress	-0.09	0.07	-0.07	1.53	0.17	-0.22 0.04
Control Condition	0.11	0.15	0.04	0.72	0.47	-0.19 0.40
Support Condition	0.23	0.15	0.09	1.53	0.13	-0.07 0.52

Adjusted $R^2 = .004$

$F = 1.59$

* $p < .05, **p < .001$

3.1.2.5.2 Effect of Condition on Willingness to Discuss Closeness-Generating Items Deeply

A multiple linear regression analysis was conducted to evaluate the extent to which experimental condition (dummy coded) affected variation in willingness to discuss closeness generating items deeply. Data conformed to the assumption of homogeneity of variance as the Levene’s Test of Equality of Error Variances was not statistically significant ($p = .17$). As seen in Table 11, experimental condition did not affect a statistically significant proportion of variation in willingness to discuss closeness-generating items deeply, $F(2, 410) = 2.71, p = .068, R^2 = .013$, Adjusted $R^2 = .008$.

Table 11: Effect of Condition on Willingness to Discuss Closeness-Generating Topics Deeply

Variable	Closeness-Generating Topics - Depth					
	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	95% CI
Constant (stigma)	2.74	0.09		31.68	0.00	
Control Condition	0.21	0.12	0.10	1.77	0.08	-0.02 0.45
Support Condition	0.26	0.12	0.13	2.22	0.03	0.03 0.50

Adjusted $R^2 = .008$

$F = 2.71$

* $p < .05$, ** $p < .001$

3.1.2.5.3 Effect of Condition on Number of Closeness-Generating Items Selected

A multiple linear regression analysis was conducted to evaluate the extent to which experimental condition (dummy coded) affected variation in number of closeness generating items selected. Data conformed to the assumption of homogeneity of variance as the Levene’s Test of Equality of Error Variances was not statistically significant ($p = .39$). As seen in Table 12, experimental condition did not affect a statistically significant proportion of variation in

number of closeness-generating items selected, $F(2, 410) = .88, p = .42, R^2 = .004$, adjusted $R^2 = .001$.

Table 12: Effect of Condition on Number of Closeness-Generating Topics Selected

Variable	Closeness-Generating Topics - Selected						
	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	95% CI	
Constant (stigma)	4.02	0.25			0.00		
Control Condition	0.41	0.35	0.07	1.19	0.23	-0.29	1.07
Support Condition	0.39	0.35	0.07	1.13	0.26	-0.27	1.09

Adjusted $R^2 = .001$

$F = .88$

* $p < .05$, ** $p < .001$

3.1.2.6 Effect of Condition and Concealment on Goal Orientation

Hypotheses 2 and 3 collectively address the extent to which experimental condition, level of concealment, and the experimental condition X concealment interaction predict variation in avoidant-oriented and approach-oriented friendship goal endorsement.

3.1.2.6.1 Effect of Condition and Concealment on Avoidant-Oriented Friendship Goals

Data conformed to the assumption of homogeneity of variance as the Levene's Test of Equality of Error Variances was not statistically significant ($p = .68$). Symptom distress was included as a covariate. The data conformed to the assumptions of linearity of regression (a linear relationship was observed between symptom distress and endorsement of avoidant-oriented friendship goals) and homogeneity of regression (the experimental condition X symptom distress interaction effect was not statistically significant, $F(2, 381) = 0.39, p = .68$).

To test the hypothesis that the extent to which experimental condition predicts variation in endorsement of avoidant-oriented friendship goals is conditional upon level of concealment,

avoidant-oriented friendship goal endorsement was regressed on symptom distress (mean-centered), experimental condition (dummy coded), level of concealment (mean-centered), and the experimental condition X level of concealment interaction.

As seen in Table 13, collectively, symptom distress, experimental condition, concealment, and the concealment X experimental condition interaction predicted a significant proportion of variation in endorsement of avoidant-oriented friendship goals, $F(6,380) = 7.50, p < .001, R^2 = .106$, adjusted $R^2 = .092$. When evaluating the unique contribution of individual predictors as well as the experimental condition X concealment interaction, only level of concealment significantly predicted variation in avoidant-oriented friendship goals, $b = .33, t(380) = 4.19, p < .001, 95\% \text{ CI } [.17, .48], sr^2 = .044$.

Table 13: Effect of Condition and Concealment on Endorsement of Avoidant-Oriented Friendship Goals

Variable	Avoidant-Oriented Friendship Goals						
	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	95% CI	
Constant (stigma)	5.39	0.09		60.5	0.00	5.21	5.56
Symptom distress	0.11	0.06	0.10	1.92	0.06	-0.01	0.22
Control condition	0.17	0.12	0.08	1.42	0.16	-0.07	0.41
Support condition	0.11	0.12	0.05	0.86	0.39	-0.14	0.35
Concealment **	0.33	0.08	0.40	4.19	0.00	0.17	0.48
Control X Concealment	-0.12	0.10	-0.10	-1.39	0.17	-0.34	0.06
Support X Concealment	-0.14	0.10	-0.09	-1.18	0.24	-0.32	0.08
Adjusted $R^2 = .092$							
$F = 7.50$							
* $p < .05$, ** $p < .001$							

3.1.2.6.2 Effect of Condition on Approach-Oriented Friendship Goals

Approach-oriented friendship goal endorsement was regressed on experimental condition (dummy coded). Data conformed to the assumption of homogeneity of variance as the

Levene's Test of Equality of Error Variances was not statistically significant ($p = .94$). As seen in Table 14, experimental condition did not affect a statistically significant proportion of variation in approach-oriented friendship goal endorsement, $F(2,390) = 0.67, p = .51, R^2 = .003$, adjusted $R^2 < .001$.

Table 14: Effect of Condition on Endorsement of Approach-Oriented Friendship Goals

Variable	Approach-Oriented Friendship Goals						
	<i>b</i>	<i>SE-b</i>	<i>Beta</i>	<i>t</i>	<i>p</i>	95% CI	
Constant (stigma)	5.39	0.08		64.00	0.00	5.23	5.56
Control condition	0.03	0.12	0.02	0.29	0.77	-0.20	0.26
Support condition	0.13	0.12	0.07	1.11	0.27	-0.10	0.36
Adjusted $R^2 < .001$							
$F = 0.67$							
* $p < .05$, ** $p < .001$							

3.1.2.7 Hierarchical Linear Regression

Given the non-significant main effects of experimental condition on endorsement of approach and avoidant-oriented goals as well as criterion variables involving closeness-generating items, hierarchical linear regression analyses were conducted to further evaluate the predictive value of primary variables within the proposed model (internalized stigma, concealment, avoidant-oriented friendship goals, and approach-oriented friendship goals). Data was collapsed across experimental condition and level of internalized stigma was included in the subsequent analyses as the primary stigma construct of interest. Three separate hierarchical linear regression analyses were conducted to estimate the extent to which internalized stigma, concealment, internalized stigma X concealment interaction, avoidant-oriented friendship goals, and approach-oriented friendship goals predict variation in willingness to discuss closeness-

generating items and second, willingness to discuss closeness-generating items deeply, and third, number of closeness-generating items selected. For each of the separate closeness-generating criterion variables, a three-stage hierarchical linear regression analysis was conducted. In the first block, experimental condition (dummy coded) was included to account for any variation attributed to the experimental manipulation. In the second step level of internalized stigma, level of concealment, level of internalized stigma X level of concealment interaction were simultaneously included. In the third step, endorsement of approach-oriented goals and endorsement of avoidant-oriented goals were simultaneously added.

3.1.2.7.1 Willingness to Discuss Closeness-Generating Topics

On the first step, when experimental condition (dummy coded) and current symptom distress (centered) were included, the prediction model did not account for a statistically significant proportion of variation in willingness to discuss closeness-generating items (1.2%), $F(3,366) = 2.50, p = .06, R^2 = .020, \text{Adjusted } R^2 = .012$.

On the second step, when level of internalized stigma, level of concealment, and the internalized stigma X level of concealment interaction were included, the prediction model showed a statistically significant increase in predicted variation in willingness to discuss closeness-generating topics, $F \text{ Change}(3, 363) = 4.40, p = .01, R^2 \text{ Change} = .034$. At step 2, the prediction model accounted for a statistically significant proportion of variation in willingness to discuss closeness generating items (3.9%), $F(6,363) = 3.49, p < .01, R^2 = .054, \text{Adjusted } R^2 = .039$. Only level of concealment, $b = -.13, t(363) = -2.40, p = .02, \text{CI} [-.23, -.02], sr^2 = .015$, uniquely predicted a significant proportion of variation in willingness to discuss closeness generating items.

On the third step, when endorsement of approach-oriented goals and avoidant-oriented goals were added, the prediction model showed a statistically significant increase in predicted variation, $F \text{ Change}(2, 361) = 40.97, p < .001, R^2 \text{ Change} = .175$. In the final model, collectively current symptom distress, experimental condition, level of internalized stigma, level of concealment, the internalized stigma X concealment interaction, endorsement of approach-oriented goals, and endorsement of avoidant-oriented goals predicted a statistically significant proportion of variation in willingness to discuss closeness generating items (21.2%), $F(8,361) = 13.43, p < .001, R^2 = .229, \text{ Adjusted } R^2 = .212$. Within the final model, level of concealment, $b = -.11, t(361) = -2.2, p = .03, \text{ CI } [-.20, -.01], sr^2 = .010$, level of concealment X internalized stigma interaction, $b = -.09, t(361) = -2.75, p < .01, \text{ CI } [-.15, -.03]$, approach-oriented goals, $b = .56, t(361) = 9.02, p < .001, 95\% \text{ CI } [.44, .69], sr^2 = .173$, and avoidant-oriented goals, $b = -.15, t(361) = -2.40, p = .02, 95\% \text{ CI } [-.27, -.03], sr^2 = .012$ each uniquely predicted a significant proportion of variation in willingness to discuss closeness-generating items.

The inclusion of the interaction term into the model was accompanied by a statistically significant increase in predicted variation, $F(1, 361) = 7.57, R^2 \text{ Change} = .016$. The significant level of concealment X level of internalized stigma was probed in order to evaluate at which levels of concealment internalized stigma uniquely predicts willingness to discuss closeness-generating topics. Internalized stigma statistically significantly predicted unique variation in willingness to discuss closeness-generating topics at only one standard deviation above mean level of concealment ($M = 6.30$), $b = -.15, t(361) = -2.11, p = .04, 95\% \text{ CI } [-.29, -.01]$. Specifically, based on the Johnson-Neyman technique, level of concealment became a statistically significant

moderator of the relationship between internalized stigma and willingness to discuss closeness-generating topics at a mean score above 6.09 on the concealment scale.

3.1.2.7.2 Willingness to Discuss Closeness Generating Items Deeply

On the first step, when experimental condition (dummy coded) was included, the prediction model did account for a statistically significant proportion of variation in willingness to discuss closeness generating items deeply (1.2%), $F(2,369) = 3.16, p = .04, R^2 = .017, \text{Adjusted } R^2 = .012$.

On the second step, when level of internalized stigma, level of concealment, and the internalized stigma X level of concealment interaction were included, the prediction model showed a statistically significant increase in predicted variation, $F \text{ Change}(3, 366) = 4.34, p = .01, R^2 \text{ Change} = .034$. At step 2, the prediction model accounted for a statistically significant proportion of variation in willingness to discuss closeness generating items deeply (3.8%), $F(5,366) = 3.90, p < .01, R^2 = .051, \text{Adjusted } R^2 = .038$. At step 2, only level of concealment, $b = -.131, t(366) = -3.10, p < .01, \text{CI} [-.21, -.05], sr^2 = .026$, uniquely predicted a significant proportion of variation in willingness to discuss closeness generating items deeply.

On the third step, when endorsement of approach-oriented goals and avoidant-oriented goals were added, the prediction model showed a statistically significant increase in predicted variation, $F \text{ Change} (2, 364) = 32.57, p < .001, R^2 \text{ Change} = .144$. In the final model, collectively experimental condition, level of internalized stigma, level of concealment, the internalized stigma X concealment interaction, endorsement of approach-oriented goals, and endorsement of avoidant-oriented goals predicted a statistically significant proportion of variation in

willingness discuss closeness generating items deeply (17.9%), $F(7,364) = 12.58, p < .001, R^2 = .195$, Adjusted $R^2 = .179$. In the final model, level of concealment, $b = -.12, t(364) = -2.93, p < .01$, CI $[-.20, -.04]$, $sr^2 = .019$, and approach-oriented goals, $b = .41, t(364) = 8.02, p < .001$, 95% CI $[.31, .51]$, $sr^2 = .142$ uniquely predicted a significant proportion of variation in willingness to discuss closeness generating items deeply.

3.1.2.7.3 Number of Closeness Generating Items Selected

On the first step, when experimental condition (dummy coded) was included, the prediction model did not account for a statistically significant proportion of proportion of variation in number of closeness-generating items selected ($<.001\%$), $F(2,369) = .88, p = .41, R^2 = .005$, Adjusted $R^2 < .001$. On the second step, when level of internalized stigma, level of concealment, and the internalized stigma X level of concealment interaction were included, the prediction model showed a statistically significant increase in predicted variation, $F Change(3, 366) = 2.91, p = .04, R^2 Change = .023$. On the second step, however, when level of internalized stigma, level of concealment, and the internalized stigma X level of concealment interaction were included, the prediction model did not account for a statistically significant proportion of variation in number of closeness-generating items selected (1.5%), $F(5,366) = 2.10, p = .06, R^2 = .028$, Adjusted $R^2 = .015$.

When endorsement of approach-oriented goals and endorsement of avoidant-oriented goals were added in the third step, the prediction model showed a statistically significant increase in predicted variation, $F Change(2,364) = 13.27, p < .001, R^2 Change = .066$. In the final model, collectively experimental condition, level of internalized stigma, level of concealment,

the internalized stigma X concealment interaction, endorsement of approach-oriented goals, and endorsement of avoidant-oriented goals predicted a statistically significant proportion of variation in number of closeness-generating items selected (7.7%), $F(7,364) = 5.39, p < .001, R^2 = .094, \text{Adjusted } R^2 = .077$. Within the final model, approach-oriented goals, $b = .80, t(364) = 4.91, p < .001, 95\% \text{ CI } [.48, 1.12], sr^2 = 0.60$, and avoidant-oriented goals, $b = -.50, t(364) = -3.16, p = .01, 95\% \text{ CI } [-.81, -.19], sr^2 = .024$, each uniquely predicted a statistically significant proportion of variation in number of closeness-generating items selected.

3.1.3 Post-hoc analyses

3.1.3.1 Exploratory Factor Analyses

Given that the effect of experimental condition on closeness-generating criterion variables were each statistically non-significant, a factor analysis was conducted on closeness-generating items to address the underlying factor structure of the scale. If the closeness-generating items weighted onto differing factors, further analyses could be performed testing the effect of experimental condition on individual factors. A principal axis exploratory factor analysis with a direct oblimin rotation was conducted on participants' ratings of willingness to discuss each of the 20 closeness generating items. The Kaiser-Meyer-Olkin measure of sampling adequacy was .96, indicating that the data were suitable for principal axis analysis. Bartlett's test of sphericity was statistically significant, $Chi \text{ Squared } (190) = 4720.04, p < .001$, reflecting sufficient correlation between items to proceed with the analysis. In addition, all communalities were above .30. Examination of the eigenvalues and scree plot led to the decision to initially extract two factors (eigenvalues of 10.09 and 1.2, with the next highest eigenvalue = .91). However, after inspection of the rotated pattern matrix it was clear that all

items loaded primarily on the first factor with loadings ranging from .78 - .58. With respect to the second factor, the highest factor loading was .29 and there was no readily apparent conceptual interpretation of the factor.

3.1.4 Discussion

The purpose Study 2 was to experimentally test components of the proposed moderated-mediation model of avoidance and approach motivation and self-disclosure. First, stigma salience was experimentally manipulated and endorsement of approach and avoidant-oriented friendship goals were measured within the context of hypothetical friendship formation scenario. It was hypothesized that participants who wrote about a past exclusionary experience when a friend found out about his or her mental illness (stigma condition) would subsequently more strongly endorse avoidant-oriented friendship goals for the hypothetical friendship formation scenario. In addition, it was hypothesized that participants who wrote about a past experience of social support from a friend when they found out about his or her mental illness (support condition) would subsequently more strongly endorse approach-oriented friendship goals for the hypothetical friendship formation scenario. Neither of these hypotheses were supported as across experimental conditions, participants did not differentially endorse approach or avoidant-oriented friendship goals for the friendship formation scenario. In addition, results did not provide evidence the statistically non-significant main effect of experimental condition on endorsement of avoidant-oriented friendship goals was conditional upon level of concealment of mental health history.

After participants rated approach and avoidant-oriented friendship goals, they rated their willingness to discuss a series of topics that varied in level of required self-disclosure of

personal information and experiences. It was hypothesized that participants in the stigma condition, as compared to the support and control conditions, would report less willingness to discuss the closeness-generating topics, less willingness to discuss the closeness-generating items topics, and would select a fewer closeness-generating items when asked to select ten items to discuss with the person in the hypothetical friendship formation scenario. This hypothesis was not supported as across experimental conditions, participants did not differentially rate willingness to discuss closeness-generating items, willingness to discuss closeness-generating items deeply, or select different number of closeness-generating items.

It was also hypothesized that endorsement of avoidant-oriented goals would negatively predict, and approach-oriented friendship goals would positively predict, variation in willingness to discuss closeness-generating items across each of the three closeness-generating criterion variables. Results demonstrated that level of endorsement of avoidant-oriented friendship goals predicted a statistically significant proportion of variation in willingness to discuss closeness-generating items and number of closeness-generating items selected. However, level of avoidant-oriented friendship goal endorsement did not predict a significant proportion of variation in willingness to discuss closeness-generating items deeply. Endorsement of approach-oriented friendship goals predicted a statistically significant proportion of variation in each of the closeness-generating criterion variables. In addition, endorsement of approach-oriented friendship goals predicted a larger proportion of variation in closeness-generating criterion variables as compared to endorsement of avoidant-oriented friendship goals.

Given that there were no statistically significant differences in mean ratings of avoidant-oriented goal endorsement, approach-oriented goal endorsement, or closeness-generating criterion variables between experimental conditions of stigma salience, support, or the control condition, mediation analyses were not conducted to test the overall moderated-mediation model.

Hierarchical linear regression analyses were conducted to further evaluate the role of internalized stigma in the proposed model pertaining to disclosure related outcomes differing from those measured in Study 1. In addition, level of concealment was included in the prediction model. Across all three hierarchical linear regression models, endorsement of approach-oriented friendship goals uniquely, and most strongly, predicted variation in closeness-generating criterion variables. In addition, level of concealment uniquely predicted variation in willingness to discuss closeness-generating topics and willingness to discuss closeness-generating topics closely. These results are consistent with results from Study 1 where approach-orientation uniquely positively, and concealment uniquely and negatively predicted variation in willingness to disclose negative emotions and distress to a close friend.

4. Study 3

The purpose of Study 3 was to experimentally test the extent to which the manipulation of approach and avoidant-oriented friendship goals affect the same closeness-generating criterion variables measured in Study 2. The emphasis for Study 3 was on the latter half of the model to test the pathways between goal-orientation and disclosure. Since the activation of avoidant-oriented and approach-oriented interpersonal motivation is a normative process that occurs regardless of mental health history, Study 3 inclusion criteria for participation did not include past history of a psychiatric diagnosis. In addition, fear of negative evaluation and self-esteem were tested as potential moderators of the effect of experimental condition on the s closeness-generating criterion variables.

4.1 Hypotheses

Study 3 tested three primary hypotheses. Hypothesis 1 predicted that participants in the avoidant-oriented friendship goal prime condition will report on average less willingness to discuss closeness-generating topics, less willingness to discuss closeness-generating topics deeply, and on average select a lower number of closeness-generating topics (out of ten) in comparison to the approach-oriented friendship goal condition and the control condition.

Hypothesis 2 predicted that the main effect of goal-orientation on closeness-generating criterion variables will be conditional upon level of self-esteem.

Hypothesis 3 predicted that the main effect of goal-orientation on closeness-generating criterion variables will be conditional upon level of fear of negative evaluation.

4.1.1 Method

4.1.1.1 Recruitment

According to G*Power in order to achieve a level of power of .80 for a One-Way ANOVA with three groups and expecting at medium effect size ($f = .25$) would require 159 participants. A community sample of participants were recruited through the Duke University Psychology and Neuroscience Undergraduate Participant Pool and the Duke University IBRC Community Participant Pool.

4.1.1.2 Participants

A sample of 171 participants, 18 years of age or older were recruited to complete Study 3. Participants completed Study 3 between December 8, 2016 and March 1, 2017. All participants recruited through the IBRC completed the study in-person. Participants recruited through the Duke University Psychology and Neuroscience Undergraduate Participant Pool completed the study either in-person or online. The final sample included for analyses consisted of 162¹ participants, 74.1% female, predominantly

¹ Before composite variables were computed data was screened for quality. The primary indicator of data quality involved time spent completing the entire study. Of particular focus was the completion time for participants who completed the study online. Based upon time spent completing the study during a pilot testing phase, the

Caucasian (51.9%), Asian (23.5%), and African American (12.3%). On average participants were 24.95 ($SD = 10.50$) years old. See Table 15 for a complete summary of background characteristics.

data from four participants were removed for taking under 6 minutes to complete the study and 5 participants were removed for taking over 45 minutes. As a result, data from 9 participants were removed from primary analyses. Analyses were also completed with the initial sample of 171 participants. Results from analyses involving initial sample of 171 participants were consistent with results reported.

Table 15: Study 3 Sample Characteristics

Characteristic	Mean (SD) or % (n)
<i>Age</i>	24.95 (10.5)
<i>Gender</i>	
Male	25.9% (42)
Female	74.1% (120)
<i>Ethnicity</i>	
White	51.9% (84)
Black	12.3% (20)
Hispanic	3.7% (6)
Asian	23.5% (38)
Multi-racial	8.6% (14)
<i>Relationship Status</i>	
Married	4.3% (7)
In a relationship or Dating	35.8% (58)
Single	56.2% (91)
Divorced or Separated	3.7% (6)
<i>Employment Status</i>	
Employed (full-time or part-time)	18.5% (30)
Unemployed	1.2% (2)
Retired	0.6% (1)
Full-time home-maker	0.6% (1)
Student	79% (128)

4.1.1.3 Study design, Manipulation, and Measures

4.1.1.3.1 Introduction

All participants read the following prompt before being randomly assigned to either the avoidant-oriented friendship goal, approach-oriented friendship goal, or control condition. The goal-orientation manipulation was adapted from Strachman &

Gable's (2006) experimental manipulation of approach and avoidant-oriented social goals.

The purpose of this study is to better understand the ways friendships are formed between people who are getting to know each other for the first time. When we meet someone new who we would like to become friends with our goal is often to establish a close connection. In doing so, we discuss a range of topics that vary in personal self-disclosure. We believe that the best way to establish a connection is to share personal information with each other. Spend the next few moments imagining yourself in the following scenario. Imagine you have recently met a person who you would like to become friends with. You are now having a chat with this person, and you would like them to get to know you better.

Participants then received additional instructions that differed based upon assignment of experimental condition.

<i>4.1.1.3.2 Goal-Orientation Manipulation</i>
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Participants assigned to the approach-oriented friendship goal condition received the following instructions;

Disclosing personal information about oneself to this person can be beneficial, leading to connection, closeness, and fostering relational growth. During your interaction, try to deepen your connection with your partner, try to move towards growth and development of your connection, and try to enhance the bonding between you and your partner. Have a good time, show your good qualities, and make a good impression.

Participants assigned to the avoidant-oriented friendship goal condition received the following instructions;

Disclosing personal information about oneself to this person can be risky, leading to embarrassment, discomfort, and negative evaluation. During your interaction, try to avoid disagreements and conflicts with your partner, try to stay away from topics that could harm your connection, try to avoid getting embarrassed, and try to make sure nothing bad happens during your interaction. Don't have a bad time, don't show your

bad qualities, and don't make a bad impression.

Participants assigned to the control condition did not receive any additional instructions.

4.1.1.3.3 *Self-Disclosure*

After completing the experimental manipulation, similar to Study 2, participants were asked to provide ratings of both their general willingness and the depth at which they would be willing to discuss 40 different topics with the person in the hypothetical friendship formation scenario. The topics were the same 40 items taken from Aron, Wlinat, Aron, Vallone, & Bator's (1997) interpersonal closeness generating task and range in level of potential and required personal self-disclosure. Of the 40-items, 20 items classified as small-talk items, involving less intimate topics of disclosure (what is your favorite holiday, why?; what did you do this past summer?). The other 20 items are classified as closeness-generating items, involving more intimate topics (what does friendship mean to you?; If you could change anything about the way you were raised, what would it be?).

For each item, participants first reported their willingness discuss each item (1 = very unwilling, 2 = unwilling, 3 = somewhat unwilling, 4 = neutral, 5 = somewhat willing, 6 = willing, 7 = very willing). In Study 3, the reliability of willingness to discuss closeness-generating items was ($\alpha = .91$). Second, participants reported the depth at which they would be willing to discuss each item (1 = not at all deeply, 2 = slightly

deeply, 3 = moderately deeply, 4 = deeply, 5 = very deeply). In Study 3, the reliability of willingness to discuss closeness-generating items deeply was ($\alpha = .93$). Third, participants were presented with the entire list of randomly ordered items and asked to, "...select the 10 topics that you would most want to discuss with this person in order to establish a close connection." See Appendix J.

4.1.1.3.4 Self-esteem

Participants completed the 10-item Rosenberg Self-esteem Scale that measures global self-worth (Rosenberg, 1965) by measuring both positive and negative feelings about the self. All items were answered using a 4-point Likert scale, with higher scores indicating higher levels of self-esteem (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). In Study 3, the reliability of the self-esteem measure was ($\alpha = .90$). See Appendix G.

4.1.1.3.5 Fear of Negative Evaluation

Participants completed the Brief Fear of Negative Evaluation Scale (BFNE; Leary, 1983). The BFNE is an 11 item questionnaire that measures trait level concern for social evaluation and approval. All items are answered using a 5-point Likert scale with higher scores indicating higher levels of fear of negative evaluation (1 = not at all characteristic of me, 2 = slightly characteristic of me, 3 = moderately characteristic of me,

4 = very characteristic of me, 5 = extremely characteristic of me). In Study 3, the reliability of the fear of negative evaluation measure was ($\alpha = .88$). See Appendix K.

4.1.1.3.6 *Demographics*

Demographics: Participants will complete background demographic information pertaining to their age, relationship status, and race/ethnicity.

4.1.1.4 Statistical Analyses

First, prior to completing primary data analyses, all variables were evaluated for violations of the statistical assumption of normality of residuals, as well as for the detection of statistical outliers ($\pm 2.5 SD$ from mean).

Third, bivariate correlations were run between gender, self-esteem, fear of negative evaluation, and all disclosure related outcome variables.

Fourth, regression analyses were conducted to test the extent to which experimental manipulation of goal orientation affected disclosure outcomes pertaining to closeness generating items.

Fifth, regression analyses were run to test the extent to which experimental manipulation of goal orientation on disclosure outcomes pertaining to closeness generating items was conditional upon self-esteem of fear of negative evaluation.

4.1.2 Results

4.1.2.1 Statistical Assumptions

Two categories of criteria were evaluated in order to address the extent to which the assumption of normality of residuals was met for each variable. First, descriptive statistics of skewness and kurtosis were evaluated for values ± 1.00 (George & Mallery, 2003). Second, histograms and normal q-q plots were evaluated visually to detect severe departures from normality. See Table 16 for a complete summary of sample statistics evaluating normality of residuals and detection of outliers. With respect to statistical outliers, 2 mean scores on willingness to discuss closeness-generating topics, 1 mean score on the willingness to discuss small-talk topics, and 2 mean scores on the willingness to discuss closeness-generating topics deeply qualified as statistical outliers, falling more than ± 2.5 standard deviations from the mean. Statistical outliers on the aforementioned variables were removed from subsequent analyses.

Table 16: Study 3 Descriptive Statistics Addressing Assumption of Normality of Residuals and Statistical Outliers

Variable	Full sample			Outliers removed	
	Outliers	Skew	Kurtosis	Skew	Kurtosis
Closeness-Generating - Willingness	2.00	-0.09	0.30	0.12	-0.01
Small-Talk - Willingness	1.00	-0.57	0.13	-0.39	-0.54
Closeness-Generating - Depth	2.00	0.40	-0.05	0.28	-0.24
Small-Talk - Depth	0.00	0.30	-0.65		
Closeness-Generating - Selected	0.00	-0.04	-0.81		
Self-Esteem	0.00	-0.31	-0.37		
Fear of Negative Evaluation	0.00	0.10	-0.14		

4.1.2.2 Bivariate Correlations

Bivariate correlations between all disclosure outcomes, self-esteem, fear of negative evaluation, and gender were conducted to examine relationships between primary variables included in Study 3. As can be seen in table 17, self-esteem was statistically significantly correlated with the following: willingness to discuss closeness-generating topics ($r = .20, p = .01$), willingness to discuss closeness-generating topics deeply ($r = .16, p = .04$), willingness to discuss small-talk items ($r = .19, p = .02$) and willingness to discuss small-talk items deeply ($r = .19, p = .02$). However, self-esteem was not statistically significantly correlated with number of close-talk items selected ($r = -.04, p = .63$). Fear of negative evaluation was not statistically significantly correlated with any of the disclosure outcomes.

Gender was negatively correlated with willingness to discuss small-talk topics ($r = -.32, p < .001$) and willingness to discuss small-talk topics deeply ($r = -.22, p = .01$). The aforementioned correlations suggest that male participants were less willing to discuss small-talk topics across both measures.

4.1.2.3 Descriptive Statistics

Averaged across experimental conditions participants endorsed a lower level of willingness to discuss closeness-generating items ($M=4.74, SD=.97$) in comparison to small-talk items ($M = 5.80, SD = .76$). The mean difference in willingness to discuss

closeness-generating items as compared to small-talk items was statistically significant $t(161) = 14.05, p < .001$.

Averaged across experimental conditions participants endorsed a lower level of willingness to discuss closeness-generating items deeply ($M=2.91, SD= .74$) in comparison to small-talk items ($M = 3.21, SD = .87$). The mean difference in willingness to discuss deeply closeness-generating items as compared to small-talk items was statistically significant $t(161) = 4.27, p < .001$.

Averaged across experimental conditions, when given the opportunity to select 10 topics to discuss in the hypothetical friendship formation scenario, participants on average selected 4.88 ($SD = 2.72$) closeness-generating items. Selecting on average 4.88 items out of 10 was not statistically significantly different from what would be expected on average (5 items) if there was no effect of item type on selection, $t(161) = -.58, p = .56$.

Table 17: Study 3 Descriptive Statistics by Condition

Measure	Condition									
	N	Scale	Avoidant		Control		Approach		Total	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Closeness - Willingness	160	1 - 7	4.66	0.96	4.76	1.00	4.87	0.81	4.77	0.93
Small-Talk - Willingness	161	1 - 7	5.86	0.80	5.80	0.76	5.77	0.78	5.81	0.78
Closeness - Depth	160	1 - 5	2.73	0.73	2.95	0.64	2.95	0.75	2.89	0.71
Small-Talk - Depth	162	1 - 5	3.26	0.88	3.22	0.92	3.17	0.82	3.21	0.87
Closeness - Selected	162	1 - 10	4.22	2.65	5.20	2.80	5.12	2.66	4.88	2.72
Self-Esteem	162	1 - 4	3.11	0.64	3.12	0.48	3.14	0.55	3.12	0.87
Fear of Negative Evaluation	162	1 - 5	3.18	0.87	3.26	0.80	3.04	0.67	3.15	0.78

4.1.2.4 Main Effect of Condition and Moderating Role of Self-Esteem

Hypothesis 1 predicted that experimental manipulation of goal orientation would affect variation in willingness to discuss closeness-generating topics, to discuss closeness-generating topics closely, and the number of closeness-generating topics selected. Hypothesis 2 predicted that the main effect of experimental condition would be conditional upon level of self-esteem. Both hypotheses were tested together by regressing closeness-generating criterion variables of interest on experimental condition, self-esteem, and the experimental condition X self-esteem interaction.

4.1.2.4.1 Willingness to Discuss Closeness-Generating Topics

Data conformed to the assumption of homogeneity of variance as the Levene's Test of Equality of Error Variances was not statistically significant ($p = .20$). Collectively, experimental condition, self-esteem, and the experimental condition X self-esteem interaction did not predict a statistically significant proportion of variation in willingness to discuss closeness-generating items, $F(5,154) = 1.59$, $p = .17$, $R^2 = .049$, adjusted $R^2 = .018$.

4.1.2.4.2 Willingness to Discuss Closeness-Generating Topic Deeply

Data conformed to the assumption of homogeneity of variance as the Levene's Test of Equality of Error Variances was not statistically significant ($p = .51$). Collectively, experimental condition, self-esteem, and the experimental condition X self-esteem

interaction did not predict a statistically significant proportion of variation in willingness to discuss closeness-generating topics deeply, $F(5,154) = 1.73, p = .13, R^2 = .053$, adjusted $R^2 = .022$.

4.1.2.4.3 Number of Closeness-Generating Topics Selected

Data conformed to the assumption of homogeneity of variance as the Levene's Test of Equality of Error Variances was not statistically significant ($p = .88$). Collectively, experimental condition, self-esteem, and the experimental condition X self-esteem interaction did not predict a statistically significant proportion of variation in number of closeness-generating items selected, $F(5,156) = 1.65, p = .15, R^2 = .05$, adjusted $R^2 = .020$.

4.1.2.5 Main Effect of Condition and Moderating Role of Fear of Negative Evaluation

Hypothesis 3 predicted that the effect of experimental manipulation of goal orientation on willingness to discuss closeness generating topics, to discuss closeness-generating topics deeply, and the number of closeness-generating topics selected would be conditional upon level of fear of negative evaluation. To test the potential moderating role of fear of negative evaluation, closeness-generating criterion variables were regressed on experimental condition (dummy coded), fear of negative evaluation (mean-centered), and the experimental condition X fear of negative evaluation interaction

4.1.2.5.1 Willingness to Discuss Closeness-Generating Topics

Data conformed to the assumption of homogeneity of variance as the Levene's Test of Equality of Error Variances was not statistically significant ($p = .20$). Collectively, experimental condition, fear of negative evaluation, and the experimental condition X fear of negative evaluation interaction did not predict a statistically significant proportion of variation in willingness to discuss closeness-generating items, $F(5,154) = 0.76$, $p = .58$, $R^2 = .024$, adjusted $R^2 < .001$.

4.1.2.5.2 Willingness to Discuss Closeness-Generating Topics Deeply

Data conformed to the assumption of homogeneity of variance as the Levene's Test of Equality of Error Variances was not statistically significant ($p = .51$). Collectively, experimental condition, fear of negative evaluation, and the experimental condition X fear of negative evaluation interaction did not predict a statistically significant proportion of variation in willingness to discuss closeness-generating deeply, $F(5,154) = 0.85$, $p = .51$, $R^2 = .027$, adjusted $R^2 < .001$.

4.1.2.5.3 Number of Closeness-Generating Topics Selected

Collectively, experimental condition, fear of negative evaluation, and the experimental condition X fear of negative evaluation interaction did not predict a statistically significant proportion of variation in number of closeness-generating items selected, $F(5,156) = 1.13$, $p = .35$, $R^2 = .035$, adjusted $R^2 = .004$.

4.1.3 Post-Hoc Analyses

4.1.3.1 Exploratory Factor Analysis

Because of questions regarding the factor structure of the closeness-generating items, a principal axis exploratory factor analysis with a direct oblimin rotation was conducted on participants' ratings of willingness to discuss each of the 20 closeness generating items. The Kaiser-Meyer-Olkin measure of sampling adequacy was .90, indicating that the data were suitable for principal axis analysis. Bartlett's test of sphericity was statistically significant, $X^2(2, N = 190) = 1348.36, p < .001$, reflecting sufficient correlation between items to proceed with the analysis. In addition, all communalities were above .30. Examination of the eigenvalues and scree plot led to the decision to extract five factors (eigenvalues of 7.70, 1.32, 1.26, 1.15, and 1.08, with the next highest eigenvalue = .89). Inspection of the rotated pattern matrix showed that the five factors reflected discussion topics with respect to disclosure of (1) family dynamics, (2) friendship meaning and value, (3) future endeavors and past accomplishments, (4) important personal information and embarrassing events, (5) intended behavior if death was imminent.

The effect of experimental condition on each of the five factors was tested. Experimental condition did not explain variation across factors with items reflecting; family dynamics, friendship meaning and value, future endeavors and past accomplishment, or intended behavior if death was imminent.

However, experimental condition did affect variation in willingness to discuss topics relevant to important personal information and embarrassing events, $F(2, 159) = 6.61, p = .002, R^2 = .077, \text{Adjusted } R^2 = .065$. Participants in the approach condition ($M = 5.4, SD = .98$) on average rated factor 4 items higher in comparison to the avoidant condition ($M = 4.57, SD = 1.33$) and control condition ($M = 5.14, SD = 1.26$). Further analysis of partial regression coefficients provided evidence that mean ratings on factor 4 significantly differed between the avoidant and control condition, $b = .567, t(159) = 2.41, p = .02$, and the avoidant and support condition, $b = .827, t(159) = 3.59, p < .001$.

4.1.4 Discussion

The purpose of Study 3 was to experimentally test the extent to which the manipulation of approach and avoidant-oriented friendship goals affect willingness to discuss closeness-generating topics, willingness to discuss closeness-generating topics deeply, and the number of closeness-generating topics selected when forming a friendship with a person in a hypothetical friendship formation scenario. In addition the extent to which the effect of goal-orientation manipulation affects closeness-generating criterion variables is moderated by levels of self-esteem and fear of negative evaluation were also tested.

Results from Study 3 did not provide supportive evidence for the three hypotheses tested in the study. Manipulating friendship goal orientation (approach, avoidant, or control) prior to the hypothetical friendship formation scenario did not

statistically significantly affect willingness to discuss closeness-generating topics, willingness to discuss closeness-generating topics deeply, or the number of closeness-generating topics selected to discuss. Further, the non-significant main effect of condition was not moderated by either level of self-esteem or fear of negative evaluation. Post-hoc analyses evaluated the main effect of condition on individual factors generated from an exploratory factor analysis conducted on closeness generating items. One factor comprising of two items addressing disclosure of embarrassing information and important personal information was found to statistically significantly differ across experimental condition. Further, mean ratings on this factor significantly differed between the avoidant and control condition and the avoidant and approach condition.

5. General Discussion

The current studies examine ways in which stigma surrounding mental illness activates psychological and interpersonal mechanistic processes that can exacerbate the course of mental illness for people coping with psychiatric disorders. The primary purpose of the series of studies was to empirically evaluate the proposed moderated-mediation model of stigma, avoidant-orientation, and self-disclosure. Results from Studies 1 and 2 did not provide evidence for avoidant-oriented motivation or goals as a potential mediating mechanism through which the relationship between stigma and self-disclosure within established and developing friendships can be explained. In addition, results from Study 3 did not provide evidence for the latter portion of the model which proposes that avoidant-oriented versus approach-oriented goal activation affects personal self-disclosure.

Aside from evaluating the potential mediating role of avoidant-orientation, a primary objective of Study 1 was to evaluate the extent to which internalized stigma is independently related to avoidant-orientation while controlling for current symptom distress. Avoidant-orientation and protective interpersonal motivation and behaviors could potentially also be perpetuated by the symptoms of the mental illness itself rather than the stigma surrounding the disorder. Past research examining the impact of stigma on relationship related outcomes has not always controlled for symptom distress. Results from Study 1 demonstrated that internalized stigma uniquely predicted a

statistically significant proportion of variation in avoidant-orientation when controlling for symptom distress. Symptom distress also uniquely predicted a significant proportion of variation in avoidant-orientation when controlling for internalized stigma, further supporting the importance of disentangling the impact that stigma has upon relational processes from the impact of current symptomology. Although Studies 1 – 3 did not provide evidence for avoidant-orientation as a potential mediating mechanism through which stigma inhibits self-disclosure, evidence supporting the relationship between internalized stigma and avoidant-orientation while controlling for symptom distress provides reason to extend this line of work towards other relational behaviors and outcomes perhaps better predicted by avoidant-orientation.

There were limitations across Studies 1 -3 that can perhaps lend insight into the results of the studies and into the direction of future work within this program of research. First, the cross-sectional methodology used in Study 1 does not account for the time span through which the internalization of stigma occurs and its potential subsequent impact on avoidant-orientation and relational behavior. Therefore, the ability to infer causality through a mediation process using a cross-sectional design is limited. Future studies should employ more complex methodologies and statistical analyses (i.e., cross-lagged longitudinal mediation models; structural equation modeling) appropriate for investigating the extent to which varying forms of stigma impact relational behavior and outcomes overtime through avoidant-orientation.

Second, the hypothetical friendship formation scenario used in Study 2 and Study 3 may not have provided an adequate context to detect the expected small effect of the experimental manipulation. Specifically, the artificial nature of the hypothetical social scenario may not have been conducive to detecting behavioral intentions associated with concerns of social evaluation and acceptance. Future research, when using a similar friendship formation paradigm, should be run in-person with participants under the impression that a true interpersonal interaction will take place.

Third, across Study 1 and Study 2, criterion variables of interest including disclosure of negative emotions, disclosure of distress, and self-disclosure on closeness-generating topics were more strongly positively correlated with approach-oriented motivation and goals than negatively correlated with avoidant-oriented motivation and goals (See Table 3 and Table 9). For example, with respect to the willingness to disclose negative emotions, separately, avoidant-orientation predicted an equivalent amount of variation in comparison to approach orientation. However, when both avoidant-orientation and approach-orientation were each included within the same regression model, approach-orientation predicted a larger proportion of unique variation in comparison to avoidant orientation. In addition, results from a majority of the hierarchical linear regression analyses conducted in Study 1 and Study 2 provide evidence that approach-orientation and approach-oriented goals uniquely predicted

variation in disclosure outcomes, whereas avoidant-orientation and avoidant-oriented goals did not.

The consistent evidence that approach-orientation and approach-oriented goals more strongly predicted self-disclosure outcomes across carries implications for the proposed model with respect to self-disclosure outcomes. Given that internalized stigma was unrelated to approach-orientation or endorsement of approach-oriented goals, internalized stigma does not limit self-disclosure indirectly through reducing approach-oriented motivation. Rather, if internalized stigma does impact relational processes, other than disclosure, one way it may do so is through the endorsement of avoidant-orientation. As a result, future research testing the proposed model should focus upon relational behaviors that are explicitly more protective in nature. For example, past research by Lattanner & Richman (2016) has shown that the relationship between internalized stigma and self-silencing can be partially explained by endorsement of avoidant-orientation. Self-silencing captures a spectrum of relational behaviors that involve the inhibition of self and emotional expression in order to avoid relational conflict or the dissolution of relationships. Although Study 1 measured willingness to disclose negative emotions and distress, there was no clear indication across the items that disclosure could lead to the same level of conflict or relational dissolution as seen on the measure of self-silencing. In addition, for Study 2, the closeness-generating discussion topics may not have been risky enough to be strongly

predictive of endorsement of avoidant-orientation. A majority of the closeness-generating topics involved neutral and potentially positive self-disclosure, and as a result, were more strongly correlated with approach-oriented goal endorsement. Therefore, future research testing the proposed model should focus on relational behaviors that are more strongly predicted by avoidant-orientation as opposed to approach-orientation. However, it is also important to better understand antecedent factors that facilitate the activation of approach-orientation for people coping with mental illness. Future research should also consider developing a better understanding of processes that improve quality of relationships as opposed to solely focusing on underlying processes that have a negative impact.

The fourth limitation of the series of studies involves the measurement of approach and avoidant-oriented goals. In Study 2, endorsement of avoidant-oriented and approach-oriented friendship goals were measured following the experimental stigma, support, or control manipulation. Averaged across conditions, participants endorsed both goal orientations for the hypothetical friendship formation scenario at a high level and ratings on the two goal-orientation measures were significantly positively correlated. In addition, ratings on both goal-orientations within the full sample were negatively skewed. It appears as though the way goal-orientation was measured did not guide participants towards differentiating between approach and avoidant goal-orientation.

This lack of differentiation between goal-orientations could have occurred for a few reasons. First, the avoidant-oriented friendship goal items addressed negative events in an interpersonal interaction that no person would want to occur (i.e., getting embarrassed; disagreements and conflicts; bad things happening; harming of connection). As a result, most participants did not want these events to occur during the hypothetical scenario. It could be the case that participants did not differentially prioritize approach versus avoidant-oriented goals for the interaction, rather provided ratings with respect to what they would want and not want to happen. If this is the case, it makes sense that participants on average would provide high ratings on both goal-orientation measures and that the measures themselves would be positively correlated.

Second, past research using a social threat manipulation to measure activation of approach and avoidant-orientation have used a more general trait measure of motivational orientation (Park & Baumeister, 2015; Murray, Derrick, Leder, & Holmes, 2008; Lattanner & Richman, 2016). This research has shown that social threat affects activation of general avoidant-orientation, but not, general approach-orientation. The approach and avoidant-goal measure in Study 2 was used because it was state oriented in nature and the items more strongly matched the demands of the hypothetical friendship formation scenario. However, although the measure aligned well with the context of the subsequent task, it is apparent there were problematic features of the

measure. Future research when measuring approach and avoidant-oriented goals following an experimental manipulation will need to address these issues. For example, in future studies, participants should be asked to select a set of specific goals that they would primarily be focusing on, allowing for a proportional score of avoidant-oriented to approach-oriented goals to be used as a criterion variable.

The role of concealment in the model also needs further refinement, as suggested by the results from Study 1 and Study 2. Although internalized and situational forms of stigma were of primary focus within in the proposed model, results from Study 1 and Study 2 provide evidence for the role of stigma concealment in limiting the self-disclosure of a broader range of emotions, distress, and personal information within established and developing friendships. Across both Study 1 and Study 2, participants on average reported that it is “somewhat true” that they conceal their mental illness from friends and others.

Level of concealment was negatively correlated with willingness to disclose negative emotions, disclosure of distress, willingness to discuss topics that require personal self-disclosure, and willingness to discuss such topics at a deep level. Further, when all variables within the proposed moderated-mediation model were included together in the same hierarchical regression analyses, level of concealment uniquely and negatively predicted willingness to disclose negative emotions and distress within established friendships and willingness to discuss closeness-generating personal

information deeply within a hypothetical friendship formation scenario. With respect to general willingness to discuss closeness-generating topics, level of concealment moderated the relationship between internalized stigma and disclosure willingness, such that for participants relatively high in level of concealment, internalized stigma uniquely and negatively predicted disclosure. The aforementioned results suggest that concealing a mental illness from friends is related to a reduction in willingness to disclose a broader range of emotions, distress, and personal information essential to developing relational intimacy within established and developing friendships.

However, the cross-sectional methodology used in Study 1 and Study 2 do not allow for claims that the relationships between concealment and self-disclosure criterion variables were in any way causal in nature, or that the relationships between concealment and disclosure could not be better explained by a third variable such as level of general disclosure in friendships. People who more generally engage in less self-disclosure in relationships would also be less likely to disclose mental health history, distress, negative emotions, and or more personal information. Also, it is reasonable to assume that people who conceal their mental illness, do so for reasons other than to protect against social devaluation. However, across Study 1 and Study 2, half of the concealment items were framed in a way that address the extent to which participants conceal their mental illness from friends for reasons to seemingly protect against devaluation (i.e., I am very careful who I tell that I have a mental illness; I never

feel the need to hide the fact that I have a mental illness from my friends). In addition, level of concealment was significantly and positively correlated with internalized stigma across both Study 1 and Study 2. As a result, evidence suggests, and past research has shown participants conceal in part due to the stigma surrounding mental illness.

However, recent research from Link, Wells, Phelan, and Yang (2015) suggests that psychological concerns related to concealment predict interpersonal behavior above and beyond the impact of internalized stigma. For example, Link and colleagues have found that the extent to which individuals fear that normative emotional and behavioral responses may be interpreted as signs of mental illness symptomology by family members predicts the likelihood of social isolation from family.

Further research should investigate the potentially different processes through which internalized stigma and concealment impact relational behavior and outcomes. First, perceived discrimination and the internalization of stigma may negatively impact relational behavior and outcomes indirectly by impairing self-image (Doyle & Molix, 2014) and subsequently motivational orientation. This is the primary line of thought in the proposed moderated-mediation model. Second, concealing mental illness from friends and family may impact relational behavior and outcomes regardless of the internalization of stigma. With respect to the latter, what is less clear based upon the results of Study 1 and Study 2 is the extent to which concealing is related to endorsing an avoidant-orientation. In Study 1, level of concealment was unrelated to endorsement

of avoidant-orientation within established friendships, however, in Study 2, level of concealment was significantly and positively related to endorsement of avoidant-oriented friendship goals when meeting a new person. Extending this line of work, it will be interesting to explore the underlying motivation, from an approach and avoidance perspective, for concealing. Although it seems most likely that people coping with mental illness conceal to prevent something bad from happening within a relationship, it could be the case that people conceal as to be able to make good things happen within their relationships, or conceal for a reason unrelated to an avoidant or approach motive. In summary, further research is needed to address the processes through which the act of concealment of mental illness itself, perpetuates concealment of other emotions and personal information in ways that are unrelated to stigma.

Past research has established a substantial amount of supportive evidence demonstrating the negative relationship between stigma and relational behavior and outcomes. It is now time to direct attention towards the normative psychological and behavioral processes that can further explain the ways in which stigma limits the initiation, development, and maintenance of intimacy within relationships.

Understanding the processes through which stigma impacts relationships have the potential to inform psychosocial treatment approaches designed to facilitate social support for people coping with mental illness.

Appendix A: Internalized Stigma

Internalized stigma

Using the scale below, please rate the extent to which each statement is true for you:

(1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true)

I feel that my mental illness is a sign of personal failure

I would not want to date someone with a mental illness

Most of the negative things people think about people with mental illness are true

I don't blame people for wanting to keep their distance from me when they find out about my mental illness

I feel guilty because I have a mental illness

People's attitudes about mental illness make me feel worse about myself

I feel I am not as good a person as others because I have a mental illness

I never feel ashamed of having a mental illness (r)

Having experiences with mental illness makes me feel that I'm a bad person

I feel out of place in the world because I have a mental illness

I feel embarrassed or ashamed that I have a mental illness

I am disappointed in myself for having a mental illness

I feel inferior to others who don't have a mental illness

Appendix B: Concealment

Concealment

(Adapted Berger HIV Stigma Scale –Disclosure Subscale; Berger, Ferrans, & Lashley, 2001)

Using the scale below, please rate the extent to which each statement is true for you:

(1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true)

In general, I tend to conceal my mental illness from friends.

I am very careful who I tell that I have a mental illness

In many areas of my life, no one knows that I have a mental illness

I never feel the need to hide the fact that I have a mental illness from my friends

Appendix C: Avoidant-Orientation

Avoidant-Orientation

(Connectedness Goals Scale; Murray, Derrick, Leder, & Holmes, 2008)

The following statements are related to your friendships. Using the scale below, please rate the extent to which each statement is true for you:

(1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true)

I often imagine myself experiencing the bad things that I fear might happen in my friendships.

I worry that I will do something that creates problems in my friendships.

My major goal in my friendships is to avoid being a failure as a friend.

I often worry that I will fail to accomplish my goals for maintaining a satisfying relationship with my friends.

I am anxious that I will fall short of my responsibilities and obligations as a friend.

I often think about the kind of friend that I am afraid I might become in the future.

I think most about the problems I see in my friendships.

I am usually focused on the ways in which my friends fail to meet my needs.

I think a lot about the weaknesses I see in myself as a friend.

When I think about the future of my friendships, I think most about the bad things that might happen.

Appendix D: Approach Orientation

Approach-Orientation

(Connectedness Goals Scale; Murray, Derrick, Leder, & Holmes, 2008)

The following statements are related to your friendships. Using the scale below, please rate the extent to which each statement is true for you:

I am focused on promoting good events in my friendships.

I often think about how I will achieve my goals for maintaining a satisfying relationship with my friends.

When I think about the future of my friendships, I think most about the good things that might happen.

I typically focus on the strengths I hope to build in my friendships in the future.

I am always trying to think of new things my friends and I can do together.

I spend a lot of time thinking about happy times and memories in our friendship.

I think most about the strengths I see in our friendship.

Appendix E: Emotional Self-Disclosure

Emotional Self-Disclosure

(Emotional Self-Disclosure Scale; Snell, Miller, & Belk, 1988)

We are often more or less willing to discuss different emotions with a friend. The following statements are related to your willingness to discuss a variety of specific emotions with a friend. Using the scale below, please rate how willing you would be to discuss each specific emotion with a friend.

(1 = very unwilling, 2 = Unwilling, 3 = Somewhat unwilling, 4 = neutral, 5 = Somewhat willing, 6 = Willing, 7 = Very Willing)

Times when you felt depressed

Times when you felt discouraged

Times when you felt pessimistic

Times when you felt sad

Times when you felt unhappy

Times when you felt jealous

Times when you felt possessive

Times when you felt envious

Times when you felt suspicious

Times when you felt resentful

Times when you felt anxious

Times when you felt troubled

Times when you felt worried

Times when you felt uneasy

Times when you felt flustered

Times when you felt angry

Times when you felt infuriated

Times when you felt irritated

Times when you felt hostile

Times when you felt enraged

Times when you felt apathetic

Times when you felt indifferent

Times when you felt numb

Times when you felt unfeeling

Times when you felt detached

Times when you felt afraid

Times when you felt fearful

Times when you felt frightened

Times when you felt scared

Times when you felt alarmed

Times when you felt happy

Times when you felt cheerful

Times when you felt joyous

Times when you felt delighted

Times when you felt pleased

Times when you felt calm

Times when you felt quiet

Times when you felt serene

Times when you felt tranquil

Times when you felt relaxed

Appendix F: Distress Disclosure

Distress Disclosure

(Distress Disclosure Index; Khan, & Hessling, 2001)

The following statements are related to how you interact with a friend(s). Using the scale below, please rate the extent to which each statement is true for you.

(1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true)

When I feel upset, I usually confide in my friends

I prefer not to talk about my problems with my friends (r)

When something unpleasant happens to me, I often go to my friends to talk about it

I typically don't discuss things that upset me with my friends (r)

When I feel sad, I tend to keep those feelings to myself. (r)

I try to find friends to talk with about my problems.

When I am in a bad mood, I talk about it with my friends

If I have a bad day, the last thing I want to do is talk about it with my friends. (r)

I rarely look for friends to talk with when I am having a problem. (r)

When I'm distressed I don't tell my friends. (r)

I usually seek out a friend to talk to when I am in a bad mood.

I am willing to tell my friends my distressing thoughts.

Appendix G: Self-Esteem

Self-esteem

(Rosenberg Self-esteem Scale; Rosenberg, 1965)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

(1 = strongly disagree, 2 = disagree, 3 = Agree, 4 = Strongly disagree)

On the whole, I am satisfied with myself.

At times I think I am no good at all. (r)

I feel that I have a number of good qualities.

I am able to do things as well as most other people.

I feel I do not have much to be proud of. (r)

I certainly feel useless at times. (r)

I feel that I'm a person of worth, at least on an equal plane with others.

I wish I could have more respect for myself. (r)

All in all, I am inclined to feel that I am a failure. (r)

I take a positive attitude toward myself.

Appendix H: Current Symptom Distress

Current Symptom Distress

(Symptom Checklist; Derogatis, Lipman, & Covi, 1973)

Below is a list of problems people sometimes have. Please read each one carefully and select the response option that best describes how distressed or bothered you have been by each problem during the past 7 days including today.

(1 = Not at all, 2 = A little bit, 3 = Moderately, 4 = Quite a bit, 5 = Extremely)

Feeling low in energy or slowed down

Trouble concentrating

Crying easily

Difficulty making decisions

Blaming yourself for things

Feeling lonely

Feeling blue

Worrying too much about things

Feeling no interest in things

Feeling hopeless about the future

Feeling everything is an effort

Feelings of worthlessness

Nervousness or shakiness inside

Trembling

Suddenly scared for no reason

Feeling fearful

Heart pounding or racing

Feeling tense or keyed up

Spells of terror or panic

Feeling so restless you couldn't sit still

The feeling that something bad is going to happen to you

Thoughts and images of a frightening nature

Appendix I: Approach and Avoidant-Oriented Friendship Goals

Approach and Avoidant-Oriented Friendship Goals

(Approach-Oriented and Avoidant-Oriented Social Goal Measure; Elliot, Gable, & Mapes, 2006)

“While getting to know this person I will be trying to...”

(1 = very untrue, 2 = untrue, 3 = somewhat untrue, 4 = neutral, 5 = somewhat true, 6 = true, 7 = very true)

avoid getting embarrassed.

enhance our bond.

avoid disagreements and conflicts.

deepen our connection.

make sure nothing bad happens.

share many fun and meaningful experiences.

stay away from discussion topics that could harm our connection.

move towards growth and development of our connection.

Appendix J: Closeness-Generating and Small-Talk Discussion Topics

Self-Disclosure – Closeness-generating and Small-Talk Topics

(Interpersonal Closeness-Generating Task; Aron, Wlomat, Aron, Vallone, & Bator, 1997).

Next you will see 40 potential topics you could discuss back and forth with this person.

For each topic you will be asked to report your overall willingness to discuss each topic and the depth at which you are willing to discuss each topic. Finally, you will be asked to select the 10 topics that you would most want to discuss with this person in order to establish a close connection.

(1 = very unwilling, 2 = unwilling, 3 = somewhat unwilling, 4 = neutral, 5 = somewhat willing, 6 = willing, 7 = very willing) -- (1 = not at all deeply, 2 = slightly deeply, 3 = moderately deeply, 4 = deeply, 5 = very deeply)

Closeness Generating Items:

If a crystal ball could tell you the truth about yourself, your life, the future, or anything else, what would you want to know?

Is there something that you've dreamed of doing for a long time? Why haven't you done it?

What is the greatest accomplishment of your life?

What do you value most in a friendship?

What is your most treasured memory?

For what in your life do you feel most grateful?

If you know that in one year you would die suddenly, would you change anything about the way you are now living? Why?

What does friendship mean to you?

What roles do love and affection play in your life?

How close and warm is your family? Do you feel your childhood was happier than most other people's?

How do you feel about your relationship with your mother?

Complete this sentence: "I wish I had someone whom I could share...."

If you were going to become a close friend with your partner, please share what would be important for him or her to know.

Share with your partner an embarrassing moment in your life.

When did you last cry in front of another person? By yourself?

What, if anything, is too serious to joke about?

If you were to die this evening with no opportunity to communicate with anyone, what would you most regret not having told someone? Why haven't you told them yet?

Your house containing everything you own, catches fire. After saving your loved ones and pets, you have time to safely make a final dash to save one item. What would it be, why?

If you could change anything about the way you were raised, what would it be?

Share a personal problem and ask your partner's advice on how he or she might handle it.

Small-talk items:

If you could invent a new flavor of ice cream, what would it be?

What is the best restaurant you've been to in the last month that your partner hasn't been to?

What is the best animal to have as a pet, why?.

What is your favorite holiday? Why?

Describe the last time you went to the zoo.

Tell the names and ages of your family members, include grandparents, aunts and uncles, and where they were born (to the extent you know this information).

Do you like to get up early or stay up late?

Where are you from? Name all of the places you've lived.

What did you do this past summer?

Who is your favorite actor?

What was your impression of the town you live in the first time you ever came here?

What is the best TV show you've seen in the last month?

Where did you go to high school? What was your high school like?

What is the best book you've read?

What foreign country would you most like to visit? What attracts you to this place?

Do you prefer digital watches and clocks or the kind with hands? Why?

What are the advantages and disadvantages of artificial Christmas trees?

How often do you get your haircut, where do you go?

Did you have a class pet when you were in elementary school? Do you remember the pet's name?

What is the last concert you saw? Had you seen them before?

Appendix K: Fear of Negative Evaluation

Fear of Negative Evaluation

(Brief Fear of Negative Evaluation Scale; Leary, 1983)

Read each of the following statements carefully and indicate how characteristic it is of you according to the following scale:

(1 = not at all characteristic of me, 2 = slightly characteristic of me, 3 = moderately characteristic of me, 4 = very characteristic of me, 5 = extremely characteristic of me)

I worry about what other people will think of me even when I know it doesn't make any difference.

I am unconcerned even if I know people are forming an unfavorable impression of me.

I am frequently afraid of other people noticing my shortcomings.

I rarely worry about what kind of impression I am making on someone.

I am afraid others will not approve of me.

I am afraid that people will find fault with me.

Other people's opinions of me do not bother me.

When I am talking to someone, I worry about what they may be thinking about me.

I am usually worried about what kind of impression I make.

If I know someone is judging me, it has little effect on me.

I often worry that I will say or do the wrong things.

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Biography

Micah R. Lattanner was born in Medford Lakes, NJ on April 6, 1984. He attended Clemson University and received a B.S. in Psychology with a minor in Sociology in May of 2007. He completed a Master's degree in Psychology with a Clinical emphasis from Xavier University in Cincinnati, OH. While pursuing his Ph.D. at Duke University, Micah earned a Master's degree in Psychology in 2015. Micah has received funding through the Society for Psychological Study of Social Issues and is a Preparing Future Faculty Fellow.

List of Publications:

Lattanner, M.R., & Richman, L.R. (in press). Effect of stigma and concealment on avoidant-oriented friendship goals. *Journal of Social Issues*.

Richman, L.S., Pascoe, E., & Lattanner, M.R. (in press). Interpersonal discrimination and physical health. In B. Major, J. Dovidio, & B. Link (Eds.), *Oxford Handbook of Stigma, Discrimination, and Health*.

Utamsingh, P.D., Richman, L.S., Martin, J.L., Lattanner, M.R., & Chaikind, J.R. (2016). Heteronormativity and practitioner-patient interaction. *Health Communication, 31*, 566-574.

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